Housing and the Housing Problem

CAROL ARONOVICI

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HOUSING
and
THE HOUSING PROBLEM

BY

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EDITOR'S PREFACE

IN THE past two years the people of the United States have not engaged in building operations due to the restrictions placed upon them by war conditions. As a consequence there is a national shortage of homes. What was a matter of importance in the larger cities has now become a serious question in every village and small city. We are really faced with a shortage of homes. The housing problem in consequence enters into the list of national difficulties. For a good many years Dr. Aronovici has been a student of housing questions and his book therefore reaches a significance, in view of the situation, that makes it valuable to the citizen who wishes to be informed on the best methods of housing people. Food shortage and house shortage, coming at the same time, enlarge high cost of living problems and emphasize the need of careful approach to their solution. It is hoped this book, on what hitherto has been a technical subject, may find a wide recognition in view of the serious situation referred to above.

F. L. M.

AUTHOR'S PREFACE

THIS book is not intended as a text for field workers engaged in the inspection of sanitary conditions, nor does it deal with any details of the technical features of construction. All that can be claimed is that it presents in outline, at least, some of the fundamental social and economic principles upon which a constructive national housing program may be built.

Most of the material presented in this book is based upon a series of lectures delivered before classes in Housing which the author conducted in the University of Pennsylvania in connection with the School of Architecture and the Wharton School. The portion dealing with the Survey was prepared in connection with classes conducted by the author in the Graduate School of the University of Minnesota. To the students who attended these classes I am most indebted.

I wish also to acknowledge my indebtedness to the editors of the *Journal of the American Institute of Architects* and the *Annals of the American Academy of Political and Social Science* for permission to reproduce certain portions of my articles which appeared from time to time in these publications.

CAROL ARONOVICI
St. Paul, Minnesota

July, 1919

CONTENTS

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THE NATIONAL SOCIAL SCIENCE SERIES

The purpose of this series is to furnish for busy men and women a brief but essentially sane and sound discussion of present-day questions. The authors have been chosen with care from men who are in first-hand contact with the materials, and who will bring to the readers the newest phases of the subject.

Housing and The Housing Problem

CHAPTER I

THE PROBLEM

THE nation-wide movement for housing reform has been stimulatd by the overwhelming evidence that has come to light within recent years and which has left no doubt in the minds of statesmen, social workers, and the public as to the existence of a serious and increasingly difficult housing problem. The evidence gathered has been so emphatically based upon the evils of the worst sanitary conditions that all efforts in the direction of reform have been centered upon the task of fixing a minimum standard for the ten or twelve per cent of the population affected. The task of accomplishing the meager results that we have to our credit, after almost half a century of tireless and socially costly effort, has been so great that we have lost sight of the broader question, namely, the establishment of financial and legal conditions that will make possible a normal development and maintenance of housing standards consistent with the progress of the most progressive of nations. In other words, we have concentrated an undue share of our efforts upon the pathological aspect of housing by exercising the utmost of our critical faculties in dealing

with the most serious existing evils. An analytical study of the causes of these evils and an examination of the normal conditions of trade that control the building of homes would have pointed the way towards a broader housing movement based upon the needs of the nation as a whole, rather than upon the conditions which, through the lack of statesman-like policies in the housing of the people, affect very seriously only a minor share of the population.

The result has been the development of a school of housing legislation which has the regulation of the tenement as its main object, and which has made housing reform synonymous with tenement legislation.

While the need and importance of tenement-house legislation and reform as a step in the direction of solving our housing problem cannot be questioned, and while we do not desire to discount the generous effort in the direction of removing our most serious of evils, it is of the utmost importance that confusion between housing as a problem of establishing minimum standards of sanitation for a limited proportion of the population, and housing as a factor of social, moral, and economic progress in the development of the nation as a whole should be avoided.

Economically speaking we may divide the families for whom housing accommodations must be provided as follows:

1. The subnormal who are unable to pay a rental that would yield a reasonable return upon a home of a minimum standard of sanitation.
2. The wage-earners capable of paying rentals on the basis of a minimum standard of housing.
3. Well-paid, unskilled wage-earners.

4. Skilled wage-earners.
5. Lower-grade business and professional classes.
6. High professional and business classes.
7. Leisure class.

It is safe to assume that the larger share of our housing problem affects the first two classes and that only in a slight and indirect way are the other classes living under conditions that fall below a minimum standard of sanitation and comfort. What proportion of the population of the country belongs to each of the classes above suggested is more a matter of conjecture than of absolute certainty. We must admit, therefore, that what has been generally classed as the housing problem is only a small part of the larger question, namely, of *providing facilities for the highest possible housing standard within the reach of the largest proportion of the people.*

The number of houses that are constantly being built in the United States to accommodate the normal increase in the population and the growing influx of immigrants is not generally based upon the demand for accommodations, but rather upon certain social, economic, and legislative conditions which in no way meet local and temporary contingencies. The result is a constant lack of adjustment between demand, which is easily ascertainable, and the supply, which is far removed from the numerical demand for the various types of home consistent with incomes and standards of the people demanding them.

The function of legislation is the fixing of standards; that of government, the creation of conditions that make the maintenance of such standards possible. The fixing of standards on a basis so rigid

as to render progress impossible, and the failure of government to safeguard these standards by creating social and economic conditions consistent with them, constitute a breach against the principle of personal freedom that is opposed to our conception of true democracy.

There is no subject to which we attach more social significance than we do to the home. The poet, the moralist, the efficiency expert, and the social reformer have made the homes the center of their speculations, and have pointed to them as the means of realizing their individual and social ideals. We are all agreed that the one-family house with private garden and plenty of open space is the condition towards which we should all strive and yet we have permitted our cities to develop into tenement centers with the most serious dangers to health, privacy, comfort, and safety.

Home ownership as a force in promoting personal and social efficiency is everywhere recognized and yet the proportion of home ownership in this country is constantly on the decrease and so far no government action against this tendency has been resorted to in this country.

Esthetically unattractive homes are a permanent detriment to our cities and a loss of human pleasure that can hardly be estimated in terms of currency. Is the city or the state or private enterprise exercising an organized effort in the direction of raising the esthetic standard of the average American home?

Certain types of building, like the row of houses and tenements, are less conducive to healthful conditions and a low mortality rate than others like the single or semi-detached homes. Has a national or

a local policy been established to encourage the better types?

These and many others are indisputable conditions that would lead towards the establishment of a high standard of homes. Some are subject to scientific verification and formulation while others are based upon the accumulated experience and the inborn convictions which act as a powerful agent in rendering these factors effective in formulating public opinion.

The student of housing reform will find, however, that legislation has failed to recognize the broader need of housing the people of this country, while a mass of restrictive legislation has been accumulated, applicable in the main to building alone and limited largely to the multiple dwelling as a prevailing type. That many of these restrictive laws are based upon experience limited to a small number of localities, and that they are derived from the study of pathological rather than normal conditions, must be recognized. It must also be conceded that the regulations now in force are at best mainly the result of mutual concessions between legislators, housing reformers, and property owners.

For example, we have fixed a minimum amount of air space but no evidence is available as to the sufficiency of the amount as a means of insuring the safest minimum standard. We demand certain space between buildings in order to insure the best light and ventilation and fail to realize some of the essential conditions, like prevailing winds, width of streets, orientation, height of buildings, that determine the safest minimum distance. If housing is of sufficient importance to demand regulation, it

is also of sufficient importance to demand that these regulations be based upon scientific facts that cannot be questioned and do not allow of compromises. Scores of scientists abroad have found inquiries along these lines pregnant with principles which lend themselves to the most accurate formulation and are well suited for legislative enactment.

In the last analysis housing is a problem of social economics, and while scientific investigation and a careful framing of housing legislation in accord with the results of these investigations are necessary, the ultimate solution of the housing problem must be found largely in the field of economics. Regulation that becomes confiscatory or interferes with a proper return on the investment serves to aggravate rather than solve the housing problem and decreases the possibilities for a continued rise in the housing standard.

It is mainly with the application of economic principles to a national housing policy that this book is concerned.

Hundreds of cities in the United States have within recent years made studies of their housing conditions, or rather housing evils, and the writer is responsible for more than a score and ten of such studies. With very few exceptions these studies present material that bears mainly upon sanitary conditions, while the essential economic principles underlying these evils are entirely overlooked. The recommendations and final action on the part of private citizens as well as legislative and administrative departments of city and state governments have been mainly of a sanitary character and have had no relation to the possibilities of building up a national policy of housing the masses.

For the sake of clearness we have endeavored to state in a few words the broader meaning of housing reform. The definition is as follows: *The furnishing of healthful accommodations adequately provided with facilities for privacy and comfort, easily accessible to centers of employment, culture, and amusement, accessible from the centers of distribution of the food supply, rentable at reasonable rates, and yielding a fair return on the investment.*

While within the limited scope of this book we shall not be able to give a detailed discussion of the various aspects of housing reform as projected by the above definition we hope, at least, to place in perspective some of the fundamental elements that should be considered in the projecting of a comprehensive housing program.

Healthful Accommodations.— This is the age when human values, at least in terms of physical well-being, are rapidly becoming recognized as fundamental to social well-being. Pure food laws, accident and health insurance, medical school inspection, the limitation of the hours of labor, particularly for women and children, industrial sanitation, child hygiene, etc., are turning the tide of medical research and medical service from cure to prevention. We have recognized in all fields of science dealing with man that heredity and environment are the factors which determine the individual, both as to his mental and physical characteristics. To what degree these two influences, so diversified both in time and extent are subject to social or individual control, is hardly possible to demonstrate accurately by scientific measurement. Housing constitutes a very considerable factor in all human life. At least eight hours or about one-third of every

person's life is spent in the home and in the case of the housekeeper the time spent in the home environment is considerably larger.

It may be said in this connection, however, that fortunately at least for some the time spent in the home outside of sleeping hours is in inverse ratio to the attractiveness and comfort that the home affords.

Dr. Arthur Newsholme in his monumental work, *Vital Statistics,* comes to the conclusion that from the point of view of longevity there is a "gain from being born in a healthy district." Beyond doubt the most interesting and in many ways the most conclusive investigation carried on in this country with a view to establishing the probable relation between health and housing was made by the United States Children's Bureau in Johnstown, Pennsylvania. Taking infant mortality as the basis of the investigation, it was found "that in homes where water was piped into the house the infant mortality rate was 117.8 per thousand, as compared with a rate of 197.9 in homes where water had to be carried into the house from outdoors — a difference of 80.1 per thousand; and that in the homes of 496 live-born babies where bathtubs were available the infant mortality rate was 72.6, while it was more than double, or 164.8, where there were no tubs."

The same investigation showed in dry houses the infant death rate to be 122.5 as against 156.7 in houses that were considered damp. A still closer relationship between sanitary facilities and infant death rates were found when the toilet facilities were considered. The homes which were provided with indoor water closets showed an infant death

rate of 108.3 as against 159.3 deaths per thousand in homes that used yard privies.

While no adequate method of measuring ventilation with any degree of accuracy is available, it is not difficult to determine at least in broad terms whether a room is well or poorly ventilated. The Children's Bureau investigation above referred to showed that of a total of 1,389 babies who lived at least one month the mortality rate of those sleeping in rooms rated as poorly ventilated was 169.2, while among those sleeping in well-ventilated rooms the mortality rate was only 28.1. Making all allowances for the differences in the intelligence of the mothers of babies living in the various classes of homes, the discrepancy is still too great to discount the above figures as an index of the relation between poor and good sanitary conditions in the home as a factor in infant mortality. Dr. Newsholme's opinion that "Infant mortality is the most sensitive index we possess of the sanitary conditions of the home" seems to be forcefully borne out by the facts above cited. Dr. Frank A. Craig in *A Study of Housing Conditions in Selected Districts of Philadelphia,* published by the Henry Phipps Institute, quotes a statement made by Miss Mildred Chadsey, Chief Sanitary Inspector of the Health Department of Cleveland, Ohio, which is as follows: "*Our city has prepared a set of pin maps that show where the cases of tuberculosis, contagious diseases, of gastro-intestinal diseases, of infants' deaths, and all deaths which have occurred during the year are marked. It has prepared another set of pin maps showing where the foul plumbing, the filthy yard closets, the dark rooms, the overcrowded lots are, and in every*

map the pins have gone in about the same place."

Perhaps a more convincing index of the relation between the home environment and infant death rate may be found in a comparison between the garden city as one type of English community and the general infant death rate in England as a whole. C. B. Purdom in his book *The Garden City* says the following: "There were 872,767 children born in England and Wales in 1912 and of these 82,939 died in their first year. That gives a rate under normal conditions of 95 for every 1,000 births, which is the lowest infantile mortality rate on record. In the garden city the rate was 50.6[1]. If the rate throughout the country had been as low as at garden city, nearly half the children who died last year would have survived. This rate of 95 per 1,000 births is, however, for the whole country. If we take the towns we shall find it much higher. The full details are not available at the time of writing, but in the 95 great towns in each of which the population at the census of 1911 exceeded 50,000, the rate was 101; in the 146 smaller towns with populations ranging between 20,000 and 50,000 at the census of 1911 it was 98. In the rest of the country the rate was 86." [2]

Dr. A. K. Chalmers, Medical Officer of Health of Glasgow, in a pamphlet on *The House as a Contributory Factor in the Death Rate* gives the following figures relative to the relation between number of rooms or apartments, as he calls them, per family and the death of persons living in such rooms or apartments: (see page 11)

[1] The birth rate was 22.9.

[2] The Registrar-General's Annual Summary of Marriages, Births, and Deaths for 1912. June 1913, pp. v-vi.

REDUCTION IN DEATH RATE DURING THE DECADE ACCORDING TO SIZE OF HOUSE

Death rate from all causes in houses of several sizes

	Census	Population	Deaths		Death rate		Per cent decrease
	1901	1911	1901	1909–12*	1901	1909–12*	1911
1 Apt.	104,128	104,641	3,405	8,161	32.7	25.9	20.8
2 Apts.	348,731	367,341	7,418	18,287	21.3	16.5	22.5
3 Apts.	151,754	160,083	2,081	5,515	13.7	11.5	16.0
4 Apts. and up	136,511	127,549	1,533	4,119	11.2	10.8	3.6
Institutions and Harbor	20,588	24,882	1,072	2,942	52.3	39.3	24.9
Not traced			207				
City	761,712	784,496	15,716	39,024	20.6	16.6	19.4

*Fourth quarter, 1909, and first three quarters, 1912

These figures indicate clearly the relation between the size of the apartment and the death rate. While the whole of the table shows a general improvement in the rate of mortality which according to Dr. Chalmers is due to various causes, the mortality rate in both periods increases as the size of the home decreases, in so far as the number of rooms is concerned.

That the size of the home has a telling effect upon stature was demonstrated during a previous inquiry carried on by Dr. W. L. Mackenzie and Captain Foster of the Scottish Education Department and covering the school year of 1905-06. The examination of 72,857 school children between five and eighteen years of age gave the following results:

Sex and size of home	Average weight lbs.	Average height ins.
Boys from one-roomed homes	52.6	46.6
Boys from two-roomed homes	56.1	48.1
Boys from three-roomed homes	60.0	50.0
Boys from four-roomed homes*	64.3	51.3
Girls from one-roomed homes	51.3	46.3
Girls from two-roomed homes	54.8	47.8
Girls from three-roomed homes	59.4	49.6
Girls from four-roomed homes*	65.5	51.6

*or more

The report relating to this investigation states: "It cannot be an accident that boys in one-room houses should be 11.7 lbs. lighter on an average than boys from four-room houses, and 4.7 inches

smaller. . . . . girls, 14 lbs. lighter and 5.3 inches shorter."

As far back as 1888 when Jacob Riis was conducting his investigations of the district of New York known as Mulberry Bend it was found that while the death rate of the city as a whole was 26.27, the death rate of the district bounded by Baxter and Mulberry streets between Park and Bayard streets had a mortality rate of 35.75, or 36 per cent higher than the general death rate. This district was at that time one of the worst slums of the City of New York.

That housing has a direct bearing not alone upon the mortality rate but upon the physical status of the occupants has been shown on various occasions. Both in England and France the urban population has for many years yielded a lower proportion of men physically fit for military service than the country districts where sanitary conditions are better and where overcrowding and the attending chances of contagion are largely removed.

During an investigation of the effects of the housing conditions in the garden city of Port Sunlight, established by the Lever Brothers, it was found that the school children at fourteen years of age averaged 62.2 inches in height while the height of the school children of the same age in Liverpool ranged from 52.2 inches to 61.7 inches according to the character of the district in which they lived. The weight of the same children averaged 108 pounds in Port Sunlight and from 71.1 pounds to 94.5 pounds in the public schools of Liverpool.

The above statistical data relating to the effects of housing upon health and physical development are sufficient to warrant a rather careful considera-

tion of some of the fundamental requirements of housing from the sanitary point of view.

The important conditions of proper sanitation are good air, plenty of light and sunshine, proper temperature, adequate water supply, removal of sources of infection and contagion, safety against fire and accident. With these more fundamental elements all housing legislation is concerned. A study of the most primitive provisions for the control of sanitary conditions in the home will be found to relate to most or all of the above essentials of housing sanitation and safety. We cannot enter into the discussion of the details of such legislation, but the laws of New York City, Minneapolis, and the ordinance of Saint Paul and other cities contain provisions along the above line.

Whether the standards adopted in this country and incorporated in the laws of our states and cities are in accord with the most recent scientific discoveries of science the writer will not venture to state. It must be admitted, however, that custom, the vested interests representing real-estate holdings, and to a certain extent the failure to focus scientific research regarding sanitary requirements directly upon the housing problem have made it necessary to adopt laws which in some instances, at least, are out of harmony with the essential needs of the people.

Privacy and Comfort.— We have pointed out in the previous section of this chapter that overcrowding means poor health and a high mortality rate. There are, however, some other fundamental social needs which demand a certain amount of privacy in the life of the individual and the family which must be recognized. It is a well-known fact

that the crowding of individuals in a small space, which makes necessary the exposing of the ordinary physical functions of the individual to the gaze of those about, leads to laxity of moral standards and a general loosening of those rules of conduct which are necessary social assets. Where persons outside of the family circle must be taken into the home, as roomers or boarders, the problem of privacy increases and the danger to the standards of privacy and morality are bound to increase. There is perhaps no greater single housing evil than the so-called "lodger evil" in this country. It is caused very largely by high rents and the tendency among immigrant classes to live in the same area, especially during their early residence in this country, when the problem of language and the desire to maintain relations with persons of the same national group and with the same customs are strongest.

There are certain regulations in many of our housing laws which deal with the problem of privacy, such as the avoidance of locating toilets so that they must be entered by passing through a bedroom, the arrangement of rooms so that bedrooms may be reached without passing through another bedroom, and the limitation of the amount of air space per person. The former two regulations can be enforced mainly in the construction of new buildings, while the last can seldom be made effective because it is usually held to constitute an infringement upon the private rights of the individual.

It should further be stated that the lack of privacy has led may individuals to seek their recreation and recuperation outside of the home, while the courting among the young men and women has been taken from the home into the park, the moving-picture

theater, the restaurant, and other places perhaps more questionable than those already mentioned. The whole question of family life and its significance as a social force has been affected by the congestion and lack of comfort in the home. This is true not alone of the slum areas but of the better class of tenement homes which are constructed mainly as storage, eating, and sleeping places, leaving no room for the higher functions of family life.

Accessibility to Place of Employment.— The experience of New York City, where factories have made their homes in the most congested section of the city in order to be within easy reach of the labor supply, indicates that there is a close relationship between the location of the home and the place of employment. The congestion of population that is becoming more and more serious in our cities further emphasizes a tendency of which New York is the most flagrant example.

How to meet the problem of accessibility to the labor market and centers of employment has not been the concern of the housing reformer, and yet the lower east side of New York and many of the slums of our larger and even the smaller cities and towns are largely the result of an inadequate distribution of manufacturing plants and the absence of easy means of inter-communication provided either by intelligent community planning or cheap and efficient means of transit. That the wage-earner and his family have followed the line of least resistance should not be a matter of surprise or criticism. A low wage and a long working day are important considerations in determining the distance between the place of employment and the home. Especially is this true where the transportation system is

inadequate and requires an hour or two out of the limited leisure of the wage-earner during which time he is packed into stuffy cars with not wholly dependable time schedules.

Recently a hopeful tendency has developed among manufacturing concerns. Many of them are moving out of the congested parts of our large cities to smaller communities or into the open country. This removal is due to an increased demand for the expansion of business which is made impossible by the high cost of land in the congested sections of our cities. The removal from the centers of population of the manufacturing plant, and the supply of labor to sparsely settled districts, is extremely interesting and promising. It follows soon after the exodus of the country folk to the city has taken place. This game of hide-and-seek between labor and employment centers shows how full of blunders our process of community building is. It is now time for the housing reformer to follow up the industrial exodus countryward with a housing policy which will avoid the congestion created by the same industries in the city, and lay the foundation for a community planning policy that will keep the multiple dwelling out of the open country and allow the light to shine in every room and grass to grow about every home that is to be built.

That an efficient and cheap transportation system is essential to a reduction of congestion is obvious. In the newer communities, however, and those which have not been fully developed as industrial centers, a community plan carefully distributing homes and industry and taking advantage of every opportunity for the reduction of distances without increasing congestion is the only safe means so far

discovered that can and will render congestion impossible in the future.

Accessibility to Centers of Culture and Amusement.— Congestion, long hours of labor, and the necessities presented by a highly developed civilization have created demand for culture and amusement which must be met, and which, because of their psychic rather than physical character, are most difficult to handle. It is only under the stress of the most pressing need that efficient workers are willing to leave the privileges afforded by the city for the monotony of the country district. The "great white way," the theaters, free lectures, libraries are assets which the wage-earner considers as part of his rights as resident of a large city. If he is to move from the city these privileges must be brought within easy reach of his new residence, or something that is as good or better in his estimation must be substituted. The cry "back to the land" will not be heard by the wage-earner of the city unless he can carry with him all the advantages that urban life affords. A movement countryward must and will be accompanied by a gradual urbanizing of the rural communities and a closer and easier contact with the things of the city.

The reduction and final removal of congestion from our large cities will be accomplished more easily and with less loss of time if cultural and amusement centers are provided in the newer communities at points that will make them accessible to the larger proportion of the population by locating them according to a plan based upon the principle of economy of time and maximum of service. Where communities have already become integrated to an extent that makes extensive planning impracticable,

cheap, comfortable and regular transit facilities only will lure the mass of the people from the slum and tenement district into more sparsely settled areas.

Accessibility to Food Supply.— So far we have dealt with factors which are mainly sanitary and psychic. We shall now deal with the economic factors in housing reform.

The cost of the food supply depends to a very considerable extent upon the quantities required in certain sections and the nearness to the center of distribution. On the east side of New York the cost of food is considerably lower than it is in other cities where there is less congestion and where the centers of distribution are less accessible. Even within the limits of New York a difference in the cost of food will be found and this variation in cost stands in indirect ratio with increase in congestion and distance from distribution center. The economic advantages presented by a low price of food can be readily seen, especially where families are large and wages are low.

It is true that so far we have not secured sufficient data upon which to base reliable conclusions concerning the differences in cost of food as determined by congestion and the distance from distributing centers. Every observation points in this direction, but further inquiry should be made so that the determining factors in the cost of food may be discovered and their relation to housing and congestion adjusted.

Regulation of the transportation facilities carried on by public service corporations, the promotion and development of the parcel-post system, the establishment of cooperative stores or cooperative purchas-

ing, the encouragement of small farming for household needs, such as the immigrants sometimes undertake, and other similar well-known and tried methods should be adopted and aided.

Reasonable Rents.— The efforts that have characterized the housing movement in the United States for the last fifteen years were, as has already been stated, wholly or almost wholly sanitary. They have added to the cost of construction and in consequence have caused a rise in the rental rates. This means that families are now paying higher rentals regardless of income, and the rise in rentals has caused a lowering of housing standards.

A study of five hundred families who in 1913 moved from one home to another has clearly shown that in 63 per cent of the case poorer accommodations were secured because of a recent change in the family income which caused a necessary change in the amount of rent that could be spared. Social workers and real-estate dealers are familiar with the frequent changes of residence among the poorer families and the changes in income which cause this frequency of change of residence.

The rise in rentals due to increased regulation and a rise in standards of construction on the one hand and the flexibility of rents due to changes in income raise a serious and fundamental question as to the efficacy of regulation and restriction without some fundamental changes in the economic factors that determine cost and rents.

After a series of studies in over a score of New England communities, and a careful examination of the literature on the subject, I venture to summarize the main principles which seem to me to

etermine cost and rent. These principles are as ollows:

1. An increase in the population without a corresponding increase in the housing accommodations of a community determines an increase in rental rates.
2. Rents increase with the increase in the height of buildings.
3. Land values increase with the intensity of land use and intensity of land use increases with the increase in the height of buildings.
4. Rentals per cubic foot of air space increase with the decrease in the size of apartment and the size of apartment decreases with the increase in height of buildings.
5. The taxation of improvements on land and the failure to tax potential land values curtail building enterprise, thereby reducing the supply of homes which results in a rise in rental rates.
6. The strict regulation of new construction without a corresponding increase in the control of old buildings tends to promote the maintenance of old rather than the building of new homes and thereby affects the rentals without a corresponding increase in the quality of accommodations.
7. Accessibility by means of transit facilities or actual proximity to place of employment, amusement, and cultural centers, etc., when furnished only to a portion of the population of the community tends to increase rentals in direct proportion to accessibility.

These principles are not new. They are the result f common observation and have been repeatedly roved both by economists and students of the hous- ig problem. They have been brought together ere so that they may be considered under the eneral head of housing rather than as broad

theories which have a scientific value but no practical application to the problem before us. Let us consider briefly each of the principles stated above.

1. Supply and Demand

We have spoken of the spasmodic and vast changes in the population of our cities both in number and in character. It is obvious that an industrial boom which calls hundreds and thousands of workers to a community without at the same time making provision for their accommodation will create a demand for homes that can be met only by increased congestion and a corresponding rise in rentals.[1]

So far cities and business concerns have been free to advertise the advantages of specific communities with a view to private gain. That booms and undue efforts to attract population should be controlled is self-evident. The task of the housing reformer should be to couple movements for local increase in industrial development and growth in population by foresight as to the necessary housing facilities required to meet the changes in population.

2. Rents and Height of Buildings

Professor Eberstadt of Berlin, one of the foremost authorities on housing, says: "The higher the building the higher the rent." This same view is taken by another German writer who maintains that with the intensity of land use, of which height is the most important, rentals increase.[2] My limited experience in New England has led me to

[1] See reports on housing conditions in Fall River and Springfield, Mass., by the writer.

[2] Prof. Dr. L. Pohle, *Die Wohnungsfrage*, Vol. II, p. 105.

the same conclusion. A study of rentals in five Rhode Island cities has shown a constant increase in the rental rates in the sections in which the tallest tenements have developed and where a consequent intensive use of land has taken place.

The importance of this principle is clearly evident. It adds strength to the increasing demand for single dwellings by supplying a purely economic basis to a demand for better sanitary conditions and an increased amount of privacy and comfort. A further working out of this principle upon a broad scientific basis is necessary in determining a constructive policy of housing legislation and the housing reformer would be fully repaid by the results of such undertaking.

3. Land Values and Land Use

We have pointed out that intensity of land use increases rentals. The speculation in land values due to an ill-fitting system of taxation and the necessity for congestion caused by poor transportation facilities and inadequate community planning are constantly increasing the value of land in the densely settled districts and are thereby affecting the housing cost and rental rates. Professor Eberstadt and his followers consider the rent problem as inseparable from the cost of land and the intensity of land use permitted by law.

In the direction of intensity of land use we have sinned in America to an extent that will take scores of years if not centuries to remedy. We have had our vision obstructed by the New York tenement and have permitted similar land use in most of the smallest communities. This intensive and uncontrolled or partially controlled land use

has resulted not only in the most abnormal increase in land values but has made possible the destruction of some of our most beautiful residential districts where a desire for gain has prompted the construction of high buildings covering abnormal proportions of the lot area and wholly out of harmony with the rest of the district.

Had we realized with regard to community building what we have long learned relative to fire protection, we would have created building zones, such as are to be found in most European cities, restricting the tall multiple dwelling to sections in which land values would make the construction of single dwellings too costly, while at the same time we would have protected the strictly residential areas against the abuse which results from intensive land use and unreasonable rental rates.

The " fire zone " is an accomplished and generally accepted fact. Why not have a building zone for the protection of health and comfort as well as for the protection of the esthetic values of the community?

4. Rents and Size of Accommodation

Measurements of apartments taken in nine New England cities — Providence, Springfield, Fall River, Newburyport, New Haven, New Britain, Waterbury, Stamford, Portsmouth—have invariably shown that with the increase in the size of the building and the number of families accommodated there is a corresponding decrease in the size of the rooms. The rentals per apartment in the larger buildings are on the average higher than in the smaller buildings accommodating fewer families. There is a fundamental principle involved in this

reasoning based on known facts which should not be overlooked. It has an economic value that would appeal to the individual interested in the welfare of the community, and has an application to the present problem of securing comfortable accommodations without placing the burden upon either the builder or the tenant. The full burden would fall upon the land speculator whose share in the upbuilding of communities may profitably be dispensed with.

5. Taxation of Land and Improvements

For the last decade the problem of city and state revenue has been increasingly the subject of study and criticism throughout the United States. We cannot at this time consider the merits and demerits of the various systems at present in vogue. All that we need to do is to point out in a general way some of the fallacies of the prevailing methods of taxing housing accommodations as related to taxes upon land. While the principle of taxation for revenue alone is adequate in the case of some commodities, the social requirements of taxation are equity and promotive qualities which will encourage progress and restrict monopoly. In the case under consideration, namely, the taxation of housing accommodations, we find that it is neither equitable, promotive of progress, nor restrictive of monopoly. The man who improves his land by placing upon it buildings that are sanitary, comfortable, and beautiful, even if that beauty is due to mere skill in the selection of models and materials, is taxed for the fullest value permitted by law and established by custom. The owner who fails to keep his property in repair, who neglects to make the best

of the potential value of his holding, pays a low tax on the basis of a low assessment. The real-estate dealer who holds out of use the land which is wanted for building purposes, and who compels builders to concentrate structures upon a limited area, pays only a very small share of the taxes. The individual builder of homes is compelled to meet the terms of the land speculator who has full control over the most important commodity necessary for home building. Frequently the land speculator who secures tracts on the outskirts of the city sells the land in smaller parcels to smaller land speculators who in turn sell it to still smaller speculators. The man or woman who in the end places the improvement upon the land pays taxes not only upon the improvement placed upon the land but upon the land which he has improved plus all the profits of three or four and sometimes as many as ten land speculators.[1] The burden of final cost, therefore, is placed upon the builder and the return upon this cost must be secured in rents which the tenant pays.

We have known of exemptions from taxation in cases where business blocks are to be erected and in some instances manufacturing establishments have been so encouraged. The building of sanitary homes has always been carried on under the burden of inequitous taxation and land speculation.

The Germans were quick to realize the importance of controlling land that is available for build-

[1]An examination of the tax books of two Rhode Island cities has shown instances of increases in purchasing value of land from 100 to 650 per cent in less than fifteen years. Professor Eberstadt cites a case of increase in value of 1,700 per cent.

ing purposes. Certain cities have secured control over large areas which are sold at reasonable prices to prospective builders, thereby eliminating to a considerable degree the land speculator and securing for the city a revenue in the form of profit on the sale of land which is not burdensome to the purchaser and at the same time assists in meeting the cities' financial obligations.

If the cities of this country were to secure control over the large tracts of land, particularly in the outskirts, they would eliminate the land speculator and would at the same time be in a position to remove a large share of the burden of taxation from the shoulders of the ultimate builder and taxpayer. In controlling such tracts of land a competition between the city and private landowners would reduce prices of land and profits on speculation.

We do not propose to solve the problem of taxation in this brief discussion; what we desire to do is simply to suggest a field of inquiry which would unquestionably lead towards more equitable taxation methods and increase the possibilities of proper building without unnecessary and unjust restrictions both public and private.

6. New and Old Building Laws

In the earlier part of this chapter we have discussed the problem of securing adequate regulations to be applied to old buildings. The competitive element that the old and unrestricted building presents against the new building hardly needs emphasis. Where the old buildings are permitted to exist without regulation, and under a system of taxation that shifts the burden from the old to the

the number of new structures should be limited and the rentals in the old buildings, for which the the rentals in the old buildings for which the demand is constantly growing, should increase. Unless land cost is reduced by some legislative and administrative means and strict regulations are imposed upon old buildings, rentals cannot be reduced or controlled as long as a considerable supply of such buildings exists.

7. Accessibility

The transit facilities that prevail in many of our cities and towns are so illy adjusted to the needs of the community, and the granting of public service franchises has been so long the source of private gain, that we seldom find proper transportation facilities, particularly in the sections of our communities occupied by wage-earners. Adequate transit provisions have come to be considered an exceptional privilege rather than a public right and the landowner and houseowners are not slow in realizing the market value of such facilities. Only when our transportation system reaches a point where it is considered the right of all, rather than the exceptional privilege of a few, will rents cease to be affected materially by accessibility to place of employment, amusements, etc.

Fluidity of the labor supply is essential both to production and to the producer. A cheap, fast, regular, frequent, well-distributed, and comfortable transportation controls the circulation of labor in its relation to the individual home. Communities are constantly changing their industrial complexion and seasonal occupations require facilities for

transportation of labor to various plants so that no group of workers would be entirely dependent upon a given center or a given district for employment. Adequate transit facilities which would comply with the above six prerequisites would give the worker a wider range in the choice of place of employment and the employer greater opportunities in the choice and supply of labor. Much of the present migratory habit of families and the small proportion of home ownership is due to the difficulty of securing adequate transit that would bring the home near the place of employment when changes of employee take place. It is a well-known fact that the collapse of a particular industrial plant around which workers have built their homes, or where speculative builders have undertaken to provide housing facilities causes those homes completely to deteriorate in value because of the absence of adequate transit facilities which would carry the workers of such a district to other parts of the community where employment could be found without necessitating a change in residence.

Where more than one member of the family is employed it is essential that facilities for diversified occupations be afforded, and this can be done either by living in congested areas where the variety of opportunities for employment is greatest or by adequate transit. That such a transit system as would comply with the conditions above outlined would emancipate the worker from both the necessity of living near the place of employment and the desire to live in congested sections of our cities can hardly be doubted. A transit system that leads rather than follows the settlements of people is the strongest competitor of the land speculator and the

greatest enemy of congestion. It is, however, essential so to control the transit system that it may not become also the land speculator.

Aside from the benefits to the fluidity of labor and the greater stability of the home, transit affords opportunities for choice of employment where wages are higher instead of limiting the worker to the district of his home. It also helps to equalize wages in districts where the supply is limited and the employers have to pay high rates of wages in order to secure the proper supply. In other words, transit makes a more uniform standard of wages possible and detaches the employment center from the residential district, thereby facilitating at least in part what is known as the zoning of communities.

In this chapter we have endeavored to outline broadly the requirements of proper housing. We have developed briefly the basis of a constructive program of reform.

In the following chapters we shall endeavor to survey the economic and social factors that would contribute to the creation of conditions favorable to the carrying out of such a program.

CHAPTER II

ECONOMIC FACTORS IN HOUSING

FOOD, clothing and shelter are the essentials of human life which determine a large share of our economic and social activities. If, however, food and clothing require constant replenishing, and have a purely personal and individual significance, shelter remains the dominant element of human necessity which has a social value for the present and the future.

We may be judged in the future by the literature that we have created; we may pass on to posterity our art in which so much is embodied; but to the people as a whole, to the future folk of the American race, nothing will be more generally visible, criticized, and accepted as evidence of the manner in which we have kept faith with posterity, than the cities which we are building and the homes we shall leave behind as the component parts of these cities and their environs.

Athens, Rome, Florence, and the many other ancient and medieval cities, are the most concrete expression of the creative genius of the past. They represent the degree of civilization and culture of the people whereby we can unmistakably assign them a place in the history of human achievement. The plastic arts were developed under the stimulus of a lavish building enterprise and were made subservient to their general utilitarian and esthetic scopes. What is the contribution of the architectural profession of this age towards the art of home

and community building? Have the achievements in architecture and its subservient arts become the heritage of the common people, or have we preserved an aristocratic building art in a world of political and social democracy? Upon the answer to these questions depends our future standard of home and community building.

There is no country in the world that is more diligently engaged upon the business of city building than the United States. Towns are built overnight and cities grow beyond recognition within the life of a generation. The rapid growth of our population and the increase in business compel this rapid development of our communities; but our methods of meeting this crisis are far from the methods that suggest permanency, adequacy of service, and social and architectural fitness.

Immigration must sooner or later become a minor factor as a means of increasing the population of this country, and the present birth rate among the foreign elements is already showing the effect of American influences by a perceptible reduction. Thus the cities of the present will more emphatically be the cities of the future than the cities of the past have become the cities of our time. In spite of this very evident tendency we are building for the present and the present alone, and the mistakes of the past are being repeated with a persistence that shows a lack of national ideals of community building and an entire absence of those principles of social conservation which are essential to steady progress. We are dealing with the subject of city building quantitatively and not qualitatively. We are builders of industries around which cities must of necessity grow, instead of building cities for the

people and providing industry as a means to an end. This method is dangerous, and it is better to recognize the fact and endeavor to become emancipated from it than to overlook, explain, excuse, and repeat *ad infinitum.*

American cities are laying at this time the foundation of their future civilization. They are becoming the backbone upon which a new and powerful nation will mold its urban destiny and in which industry and domesticity must harmonize and cooperate. This is the dictate of reason, but common practice is still following cumbersome tradition, the ever-present servant of special privilege.

Haphazard city building works hand in hand with architectural abortions; land speculation works in tacit compact with financial piracy; and the tariff on building materials adds insult to the injury of an unjust and antiquated tax system.

The fundamental error in our methods of home and city building is not found in the advanced standard of housing, either voluntary or imposed by law, nor in the failure on the part of the architectural profession to appreciate the value of building cities with consistent house units and permanent social and economic values, but to a failure to understand the relationship of the elements that enter into the value of a structure which may be expressed in terms of *distribution of investment units and their permanent social value.*

The elements that enter into the building of a home are: land, materials of construction, labor, capital, maintenance responsibility, and community improvements. The relation that the demand for homes and the economic status of the people bear to the cost of these five elements determines the

amount of building; but the manner in which the cost is distributed among these items always has determined, and will determine in the future, the character of construction. In other words, the architect is dependent upon this distribution of cost factors for his freedom in planning the individual buildings and indirectly in the planning of the cities of the present.

Land

Land, more than any other building factor, has a shifting value apart from its natural value as farm land, and it gathers its financial assets not from any intrinsic qualities but from its environment. It is more a product of its surroundings than any other biological or social element. Land may be said to have an immediate market value, which is determined by supply and demand, and a potential market value, which can and should be determined by the methods applied to the development of the community — "town planning" — in which neither the land as a natural force, nor the owner as a social agent, has any perceptible part. For convenience the discussion of the relation between land and housing is treated in the next chapter of this book.

Materials

The statement has frequently been made that in the last two thousand years, except for the introduction of steel, there has been no progress in the invention and use of building materials. So far as I am aware this statement has not been and cannot be denied. The question, therefore, resolves itself

into an examination of the factor determining the availability and cost of standard building materials.

Wood will always be the staple element of building since it is the material that invariably becomes a part of the structure and is an accessory in the making of scaffoldings, forms, etc. The United States is becoming more and more deforested and lumber is yearly increasing in price. Lumber being in many sections of the country the most important building material, the cost of construction is being enhanced and the character and size of buildings are therefore being perceptibly affected. This results in a rise in rents, and as wages do not as a rule keep pace with rents, housing standards go down.

The advocates of conservation of natural resource are clamoring for laws that would preserve and protect our forests. The builders are complaining against the high price of lumber due to monopoly and a shortage of supply while the tariff interferes with free importation of lumber. The failure to heed the demands of the advocates of conservation and the tariff imposed upon lumber render impossible the cheap building of homes and nullify much of the effort towards conservation. A removal of the tariff on lumber would in comparatively few years allow the development of national resources of lumber and make the United States a strong competitor in the lumber market of the world. The last downward revision of the tariff on lumber and other materials contains rates which show a recognition of the need for cheaper building materials and protection of the present undeveloped national resources in this country.

Other building materials, like hollow tile, are subject to tariff restrictions that are making monopoly possible with the unavoidable result of high prices. It is also true that the price of wood due to the scarcity of lumber, monopoly, and the tariff contribute to a large extent toward the maintenance of high cost of building materials which may be used instead of wood.

One other important and frequently obnoxious difficulty encountered in the reduction of the cost of building materials is due to the building regulations which are generally prepared by men mainly interested in the reduction of the fire risk and who are guided by false notions of safety. We tolerate fire and safety regulations and restrictions on one general basis and along lines which apply fairly only to a limited number of buildings located in especially crowded sections of our cities and towns and disregard the larger interests of the community as a whole. In many instances owing to failure to recognize the value of town planning, and the failure to calculate the cost of overcrowding in residential districts, we must pay for the undesirable proximity of our neighbors by an increase in the provisions for safety and protection against fire. Scientific facts giving exact data upon which to base regulations dealing with fire prevention are still wanting and the mass of available legislation is inconsistent with the best interests of the people. Careful investigation of the principles of safety and a critical examination of existing laws will undoubtedly result in the overthrow of many theories which have found expression in increased cost and unnecessary restriction.

On the question of safety our urban laws are very specific and much detailed inspection is required to insure the maintenance of the prescribed standard. The regulations are assumed to be based upon generally accepted standards unflinchingly obeyed by both builder and architect. The surprising fact, however, is to be found in the differences of standards used by the same builders and architects in the unregulated districts as compared with those used in localities under strict regulation and inspection. Were the variance in the standards used by the same men small or insignificant the subject would deserve no discussion here. The facts show, however, that building in suburban and rural districts is made considerably cheaper than in regulated areas and yet the liberties afforded by the unregulated areas present advantages to the more scrupulous and conscientious builders and architects. The question of the fitness of these regulations for dealing with safety must therefore be raised and answered beyond a question. A margin of safety, fixed at a point where it will not place unnecessary burdens upon those who in the end must pay for the structure either in direct investments or in rents, is imperative.

One of the most striking examples of what appears to be unnecessary discrimination in the matter of materials of construction, on the question of safety, is the almost general restriction placed upon the use of hollow tile in cities. This material is cheap in itself and saves labor when used in construction. That some defects may be found in a few units is not a sufficient reason for its exclusion from use. With the complicated and costly systems

of inspection now in use, coupled with additional specifications of the character of tile to be used, its fitness as material for the construction of homes could be insured beyond a question.

Labor

In the discussion of this factor of the economic aspect of housing I wish to remove from the reader's mind the ordinary conception of the word "labor" and define it as the mental and physical processes that enter into the financing, planning, promoting, directing, and carrying out of the work of land development and construction. This broad definition represents more fairly the actual labor that should be considered from the point of view of the investment. A classification of labor from the above point of view would be as follows:

- *Non-creative*
  - Financing
  - Banking
  - Legal service
  - Promotion
- *Creative*
  - Directive.....
    - Engineering
    - Architectural
    - Administrative
    - Governmental
  - Executive.....
    - Unskilled labor
    - Skilled labor

Non-creative Labor.— This classification indicates at least four functions which are distinctly non-creative. They have nothing to do with the ultimate use value of the structure and present processes necessary under today's *laissez-faire* method of providing housing accommodations that tolerate a cumbersome spoils system of

speculative building which places large unproductive financial burdens upon the ultimate occupant of a building.

In European countries, especially in France and Germany, banking and insurance laws have placed special restrictions upon the use of banking and insurance funds. These restrictions give to the wage-earner and small private builder the opportunity to secure loans from these institutions without paying exacting and unnecessary fees and without creating a host of middlemen's profits that are not creative and hinder rather than develop the opportunities for home building.

Instead of the promoter, whose standard of proper buildings is to be found in the net profits that he derives and the rapidity with which he sells and shifts responsibility, the community should provide every legitimate facility for individual enterprise. This will result in a better character of building because it will have personality and correspond to the needs of the individual families rather than to a haphazard standard of shifting averages.

Ebenezer Howard is quoted as having said that "The tasteless man has no right to realize his ideas of a house in the presence of a great multitude of his fellow-beings. It is an indecent exposure of his mind and should not be permitted." If this is true of the individual building for himself, how infinitely more true it is of the man building for others.

Speculative building as applied to the workingmen's homes is one of the most serious housing evils we have, both on account of its lack of architectural character and because of its economic

wastefulness due to a free shifting of responsibility from builder to owner. The disorganized method of the speculative builder leads to over-building in certain directions and failure to build in others. This means social waste because of oversupply of certain types of homes and failure to supply others. Speculative building means confusion in the housing market and a consequent social waste resulting from a lack of adjustment between supply and demand. The fact that only about 17 or 18 per cent of the homes of wage-earners are owned by the occupants, many of which are still carrying mortgages, is very forceful evidence of the futility of speculative building as a means of promoting home ownership. An examination of figures dealing with this aspect of the subject seems to indicate that an average charge of from 20 to 30 per cent of the total cost of a house and land is non-creative investment.

Creative Labor.— We have seen that land speculation and non-creative work in connection with promoting building enterprise consume a large although varying share of the investment of the ultimate occupant of the structure. Given a fixed capital to be invested in buildings, most of which are homes, the character of the buildings will be determined by the proportion of this capital that must be invested in non-creative work as compared with the proportion that can be spent in directing and executing the enterprise as well as in the purchase of materials.

The work of governmental control as perceived today, by the restrictive and exacting legislation and inspection, frequently approaches the point of non-creative labor. Governmental work, however, may

be made the most potent factor in promoting the interest of proper building and in reducing waste. Among the creative functions that government may and in some instances does perform there might be developed a simplified system of legal formalities in real-estate transactions, educational work in the interest of the most economic and most attractive building, the maintenance of information and experimental bureaus on matters of construction, the use of public funds in the promotion of easy financing of wage-earners' homes and the granting of exemptions from taxation of especially desirable buildings below certain values. A more general recognition of these possibilities of governmental work is necessary and unless an organized effort in this direction is made, government, in building operations, will remain synonymous with restriction, control, and limitation of business enterprise. There is no doubt as to this point of view being undemocratic and uneconomical and that it needs a speedy change to the constructive, promotive, and creative.

One approaches the subject of executive skilled and unskilled labor with much hesitancy and with the consciousness that the only reduction in the cost of labor can be found in increased efficiency which is indirectly a reduction in cost. Labor unions are an important factor in determining the investment required in the construction of certain buildings. Their wage interests are amply protected by their organizations, but unfortunately the standard of efficiency of those connected with labor unions is frequently low, and wages are in the end determined by the average efficiency of all rather than by the normal standard of efficient service. Wages in the building trade are high and they could,

with justice to all concerned, be made higher if the general standard of efficiency of the average member of the Building Trades Union were made higher. A scientific standard of efficiency in the building trade established by careful investigation would lead to a saving in the cost of construction and an increase in the average wages in the building trade.

To summarize our statement concerning labor in the broadest sense, we may say that a reduction to a minimum of the non-creative labor, a general recognition of the financial value of architectural planning and administration, a change from a non-creative and restrictive to a creative point of view of governmental functions in building affairs and a rise in the standard of efficiency of the building trades, will meet the needs of the labor problem in the field of building in general and home building in particular. Such a program is consistent with modern tendencies and is based upon concrete and ascertainable facts.

Capital

The financing of building enterprise is justly considered as a very potent factor. We have hinted at the complicated and costly machinery connected with the securing of capital to be used in the construction of buildings when the owner is not prepared to meet immediately the entire cost. The most burdensome expense in the securing and use of capital is to be found, however, in the interest that must be paid for its use. The rates paid vary from 4½ per cent, on very rare occasions, to as high as 10 per cent per year. The ultimate owner or user of the structure must pay this interest

which in the end is charged to the total cost. This being the case first mortgages are frequently not paid up by the owners of small homes and the estimate of the meager proportion of families occupying their own homes must be still further reduced if it is to give an accurate conception of absolute ownership. The annals of the struggle of small owners against loss of ownership due to high rates of interest paid upon loans form a sad chapter in the history of thrift. The state and the municipalities have made no move to furnish capital for the building of homes. Insurance companies, banks, and financial institutions use local deposits in foreign lands because of the larger returns they bring. To counteract this evil some European countries impose upon insurance companies, savings banks, etc., well-defined requirements compelling a minimum per cent of the capital to be used locally and at a fixed and low rate of interest, making provisions for financing homes for wage-earning families.

The municipalities and the state can secure money at a low rate of interest, which, with the addition of the cost of manipulating these public loans, could still assist the modest builder to secure necessary capital at a much lower rate than he pays under present conditions. The increased possibility for securing such funds would reduce the non-creative investment and would afford the community taxable values that are being retarded because of the lack or high cost of capital.

In connection with the securing of capital it should also be added that the obnoxious practice of many banks and loan associations of lending money only upon completed or almost completed

buildings places the investor at the mercy of the speculative builder who builds for the market without individuality and without regard to durability or fitness to environment.

Analysis of the actual and possible sources of capital that might be utilized in the promotion of adequate financing of homes, especially for wage-earners, may be classified as follows:

Private Sources
- Individual savings
- Private loans
- Banking institutions — particularly savings banks
- Real-estate corporations
- Cooperative and building and loan societies (garden-city organizations, building and loan organizations, cooperative home-building societies, etc.)

The above resources would depend entirely upon private initiative and the extent of the safety of the investment as well as the probable returns on such investments. The garden cities, about which we shall speak in another chapter, have proved themselves successful as a means of promoting good housing, and the building and loan societies have, in this country at least, extended their influence to thousands of prospective home owners and their assets have long passed the billion-dollar mark. Where the latter have failed is in setting up a high standard of construction, a proper control of the architectural and sanitary aspects of the buildings to be constructed with funds accumulated through the building and loan societies and adequate assistance in the selection of site and type of house to be constructed. It is on account of these failures that the building and loan associations of this

country have made no perceptible contribution toward the solution of the housing problem either as to increase in the proportion of permanent ownership or as to standards of home construction.

It may be said without hesitancy that some real-estate corporations have accomplished more in the direction of encouraging the development of the best types of dwellings, both architecturally and from the point of view of comfort and sanitation, than many of the laws upon our statute books. This, of course, does not mean that many of these corporations have not had a detrimental effect upon such standards of construction, but it must be admitted that those who have had a vision as to the economic value of proper construction have rendered a considerable social service. To be sure, many of these homes are not designed to accommodate wage-earners' families.

An improvement at any point in the rental scale of homes is bound, however, to affect housing in general. Wherein these enterprising organizations have failed is in not endeavoring to ascertain whether the cost of the homes they are constructing and the rents that must be charged for such homes are in accord with the local demand and in harmony with the most pressing needs in so far as size and type of home is concerned. It is for this reason that many otherwise desirable homes in cities are unoccupied, while there may be a real housing famine due to the lack of the types most needed and most consistent with the prevailing rental rates that the families affected by such famine can pay.

It might also be fair to say that the conservative tendencies of banking institutions contribute toward the promotion of building enterprise that would pay

well over considerable periods of time. This, however, in no way signifies that such buildings are socially an asset to the community, or that they contribute anything toward the solution of the housing problem even from the point of view of financing.

The next in importance among the sources of capital are the industrial establishments which find themselves in need of housing in order to insure an ample and permanent supply of labor. The various types of homes constructed with capital furnished by industrial establishments may be classified as follows:

Industrial Housing
- Industrial tenements
- Individual homes
- Industrial villages
- Garden villages

The type of dwelling and the number of dwellings built by industrial establishments depend upon various conditions. In large communities, where land values are high and the shortage of homes especially acute, large tenement structures are sometimes resorted to as the cheapest and quickest way of providing accommodations. This should not be interpreted, however, as meaning that industrial plants do not finance large tenements, even in small communities, such as the cotton-mill villages of Rhode Island, where land is ample but the tenement type of industrial housing has been provided.

Industrial villages have been built in this country since the early days of the development of industries which utilized water power. Many such industrial villages are found scattered along our river banks, particularly in the eastern states.

Most of these villages have remained in their original condition, but in others, where radical changes in the industries have taken place, the homes have passed into the hands of individual owners not necessarily connected with the industries the workers of which these homes were originally intended to accommodate.

In the mining districts such villages have been constructed to accommodate the families of miners, but they are in most instances very low-grade communities and not infrequently the mine owners have used these homes as a means of controlling tendencies toward labor organizations or strike troubles by ejecting the tenants who were unable to find other accommodations in the villages in which they were living.

Within recent years the garden-city idea has spread rather rapidly and we have in this country a number of so-called "garden villages" especially designed to accommodate wage-earners connected with a particular local industry. Pullman and Gary are perhaps the best-known examples of such villages. The garden village is quite the most hopeful development in the field of industrial housing, but its success will depend upon the method employed in the control of the homes contained in such villages and the facilities afforded individuals for acquiring such homes, as well as the facilities for disposing of them in case of change of residence.

The writer does not believe that garden villages constructed and maintained by industrial corporations and with the houses rented at rates which are not yielding a reasonable return on the investment will materially assist in solving the housing prob-

lem in this country. If the homes cannot be rented at a rental rate which would pay a reasonable return on the investment, one of two conditions must be present. Either the corporation constructed the homes with all the improvements at a cost far beyond the normal standard within the reach of wage-earners, or the wages are not sufficiently high to permit of a rental which would afford proper housing accommodations. In either case such enterprises should be considered socially a failure though they may assist in giving a limited group of families high-grade accommodations at a low cost.

One of the most important questions in the development of industrial housing is the method provided for the promotion of individual ownership and the methods of disposal of homes in case of removal from the community. In this respect little, if any, advance has been made. In the case of the tenements, the question of ownership settles itself, because unless a cooperative scheme of ownership is in operation no individual ownership is possible. Where individual homes are available, ownership by individual workers is possible, but the homes are wholly beyond the reach of the workers in so far as cost is concerned, and as no provisions are made for disposal of property when the owner is compelled to leave the community, it is hardly advisable for most workers to acquire a home in a community with a limited possibility for change of employment. This problem is already being recognized, however, in the garden villages of Europe, particularly in England, and the garden villages in this country are, as in the case of Billerica, making efforts to meet this situation by providing means for disposing of privately owned homes at a

price that is fair to the owner and to the corporations financing the enterprise.

Financing Through Charitable and Philanthropic Funds.— This type of housing enterprise is intended to meet two main needs, namely, to provide accommodation of a sanitary character for individuals and families whose income is below the subsistence line, and secondly to demonstrate that investments in such homes could be made to pay a reasonable return on the investment without in any way lowering the standards ordinarily recognized as a minimum of comfort and sanitation. The first experiment of this character was carried out successfully in this country by Mr. Alfred T. White of Brooklyn, who as far back as 1877 carried through a housing scheme known as the "Home Buildings" which in the first year yielded a revenue of 7½ per cent. Similar structures of this character have since that time been built in Philadelphia, New York, Providence, New Haven, etc.

Another, and perhaps the most interesting, enterprise in the direction of financing homes for persons with incomes below the subsistence line was carried out by the Octavia Hill Association of Philadelphia which has been in operation for twenty-two years and is at present in control of over three-quarters of a million dollars' worth of property, one-third of which is owned by the Octavia Hill Association, the balance being under its control as agent. This organization has been successful in demonstrating that aside from the possibility of constructing new properties for low-wage families, which would yield a reasonable return on the investment, it is also possible to rehabilitate insanitary and poorly paying property so that it may

be made suitable for habitation and also become a paying rather than a losing investment.

Ample, cheap, and long term loans of capital for housing must be provided to increase the production of homes. No radical steps or experiments in this direction are needed at this time. We have only to learn from the countries which are at this moment the allies of the United States and which in this war have increased rather than slackened their efforts towards housing reform.

Maintenance

It is a well-known fact that the difference in the cost of construction between the present-day temporary building and the higher type of permanent construction is much below the difference in the actual return on the investment when quality and length of service are considered.

If a house, because of its solid construction, yields a continuous return for fifty years with a small maintenance cost, and a flimsy structure yields a continuous return for twenty years with a high maintenance cost, it is clear which is preferable as far as the individual investor is concerned as well as from the point of view of the community as a whole. In the construction of buildings, however, immediate needs seem to be paramount and the maintenance cost is wholly overlooked. A clear vision of the economic relationship between maintenance cost and length of service as related to initial investment is still wanting.

With the savings made possible by a scientific adjustment of the relationship between the various elements of cost and the elimination of non-creative charges, greater durability could be secured. The

saving in the natural resources would have its effect upon the price of materials and greater freedom in the use of durable construction would result.

An element of maintenance cost that has received considerable attention in recent years and which is slowly making itself felt among thinking men is taxation of land values and improvements. We cannot here enter into a detailed discussion of the principles of taxation and the best methods to be adopted. A tax-reform movement that inspires confidence is now finding expression throughout the country and a solution is bound to come within a generation. We cannot refrain, however, from mentioning that monstrous system of double taxation which places a tax upon full values of mortgaged property and upon the mortgages themselves. By this system the man who is poor and must borrow in order to obtain a home is fined for his poverty.

Municipal Improvements.— The last, but not the least burdensome, cost factor in housing is the tax for municipal improvements and the manner in which it is distributed among the tax payers. Generally speaking the discussion of municipal improvements belongs to the field of municipal engineering and city planning. Neither of these subjects, however, can be separated from the problem of construction and maintenance of homes either as to cost or service.

From the economic point of view the community improvements must be carried out with due regard to three elements, namely: *service, durability, and cost.*

Service.—The city-planning movement in this country has come to stay. Every community either

has already developed a city-planning scheme, at least on paper, or is contemplating such an enterprise in the near future. It is almost the fashion with boosting and booming communities to have attractive pictures prepared of what they expect to do to provide those amenities of civic life that will be most impressive and perhaps most costly. There has been much confusion in the minds of engineers and city planners between an improvement efficiently constructed from the technical point of view and an improvement efficient from the social or community point of view. A system of parks and playgrounds which is laid out with the highest degree of technical skill, but is so planned as to make it inaccessible to a large majority of those whom it is intended to serve, is a social and economic failure. A street that is paved with the best of materials, presents a splendid vista and has a width vastly in excess of the traffic which daily utilizes such a street, may be an economic burden on the tax payer and represents a cost factor in housing that must not be overlooked.

In the carrying out of great city-planning schemes involving the construction of boulevards, the acquisition and maintenance of park areas, the development of civic centers, etc., the extent of the service that such centers will render to the home owners of the community as a whole, as compared to the few who are able to avail themselves of these improvements or those who profit by the enhancement in the value of land and improvements adjoining such improvements, must be considered.

Philadelphia has found that the cost of street construction could be reduced in residential areas by permitting the paving of only such portion of

the street area as is absolutely essential for the local traffic, and leaving sufficient unpaved area to meet possible later needs for the widening of the pavement to allow for increased traffic demands. This has proved an important economic factor in the city budget because of the saving in the original investment which deteriorates with time, the interest on the investment that is not required, and the reduction in the maintenance cost entailed by the reduction in the paved areas that would otherwise require the usual repairs, cleaning, etc.

Throughout the whole of the work of city engineering and city planning there is a vast opportunity for municipal self-control which would make only such improvements as are essential to the immediate needs of the city, that would serve the largest number of people, and above all that this service should be essential. In suggesting economies that would reduce the taxes for community improvements the writer does not overlook the need for a certain amount of foresight in community development, but it must be admitted that foresight and economy are not inconsistent but supplementary to each other. As a matter of actual fact all those familiar with the present problems of city planning realize that the present high cost of improvements is very largely due to a failure to foresee and utilize at the proper time opportunities for development or, at least, the acquisition of the necessary land for improvements.

Durability.— Permanency in public improvements cannot always be expected in municipal enterprise, especially in rapidly growing and changing communities. There are, however, certain types of improvements like main thoroughfares, parks, etc.,

which should be placed and constructed with a view to the longest possible period of service. Changes in the location or orientation of streets are costly and result in increased tax rates which are largely levied upon the homes of the people. There are also improvements which through poor engineering skill deteriorate more rapidly than the investment and than the use would ordinarily warrant. There are still other improvements the cost of which is derived from bond issues extending over periods of from thirty to fifty years, while their value and service to the community may expire at the end of a decade or two. This kind of improvement levies a tax upon home owners long after the improvement has become obsolete and merely represents a mortgage on posterity without giving posterity value in return. The accumulation of such indebtedness is one more factor in the enhancement of the expense of maintaining a home at a reasonable cost. There should be some economic fairness exercised toward the future home owners in matters of short-lived public improvements.

Cost.— What is true with regard to the selection of community improvements relative to their service is true with regard to cost, namely, that a certain amount of self-control is necessary in the promotion and the carrying into effect of planning schemes which affect the tax rate of the community. Careful selection of improvements with a view to rendering essential service first and the adjustment of cost to the normal and present resources of the community is the best policy. This does not mean the curtailment of important improvements which would be productive of increased revenues in the

near future, but does mean a closer coordination between the improvement to be made and the benefits to be derived within a reasonably short time. It is just as dangerous for a community to purchase all its permanent improvements on a credit installment basis as it is for the individual to purchase all comforts outside the daily food on the same basis.

Throughout this chapter the writer has endeavored to touch upon the important phases of the economic cost of housing. The whole problem is merely the changing of our point of view from a business economy based upon individual interests to a social economy that would be fair to the tenant and owner of homes, and would produce an adequate supply of homes as well as raise the standard without unduly enhancing the cost of a decent home.

CHAPTER III

LAND

Tandis qu'au loin, la-bas,
Sous les cieux lourds, fuligineaux et gras,
Avec son front comme un Thabor,
Avec ses sucoirs noirs et ses rouges haleines,
Hallucinant et attirant les gens des plaines,
C'est la ville que le jour plombe et que la nuit eclaire
La ville en platre, en stuc, en bois, en marbre, en fer,
en or,
Tentaculaire.

EMILE VERHAEREN

The rails of our many tentacled systems of transportation, the wide sweep of the automobile, the extension of the telegraph and the telephone, cheap magazines and the great news-carrying daily papers have brought the farmer and the country dweller to the very fountain springs of civilization. Distances are being reduced or destroyed and a leveling downward of all benefits of social and economic advance seems now possible and within the reach of the most remote corners of the country. And still they come, those wanderers of the country, those who seek employment in the many trades, those who seek reputation and honor and success and education and opportunities for service. The city is the melting-pot of the foreigner and the dumping-ground of the criminal, the unskilled and worthless. In the city genius and enterprise meet and mold the destiny of civilization.

The great advance that cities have wrought has brought with it large social and economic problems with which we are endeavoring to cope. The "back to the land movement" was the first reaction against the evils of the city and a whole back to the land philosophy was developed. The back to the land movement was soon followed by a philosophy of "the land back to the people" which is best represented by the single taxers.

The question before us as city dwellers is whether the single-tax idea can stand by itself and be a solution of the many perplexing housing problems which are the most powerful agents in the destruction of human life, and in promoting the net work of other social and economic evils that are draining the lifeblood of the centers of our civilization.

Can we believe that given cheap and ample land the slum would disappear and the open country be made into a garden city in which men and women might live and work efficiently? Can we accept the dictum of the land taxer that given free or cheap land human nature may be depended upon to solve all the other perplexing and pressing problems, and especially that of creating or improving cities so that they would present the highest possible opportunities for labor and living? These are problems that the planner of cities and hamlets has to face and answer.

A thorough analysis of these problems and their relation to land still remains to be made. There are, however, a few manifestations of the land problem which we may consider briefly in the light of housing reform and community planning.

If we accept the more modern conception of city planning as the *art of providing, and as far as pos-*

sible fairly distributing, the amenities of community life in accordance with the most modern social standard, we are at once confronted by the need for securing an ample freedom in the use and distribution of land unhampered by monopoly and therefore purchasable at a cost equivalent to the actual social value of the result to be accomplished.

It is a generally accepted economic fact that land values and the fluctuations of *increment* or *decrement* depend upon the natural social advantages that such land inherently presents plus the activities of man directly related to or dependent upon that land. That the human activities centering about certain land areas are to a considerable degree dependent upon the intrinsic natural advantages of the land as viewed from the social point of view needs hardly to be insisted upon. A parcel of land located in a swampy district would undoubtedly be of much smaller social value than one located on a high plain. An area of land located within reach of a natural seaport or a navigable river would be of greater value than an area located where access and transportation would be difficult if not impossible. These are natural characteristics of land areas which although social in character are clearly dependent, not upon human activities, but upon human needs. That the activities of man in the various localities will be determined in kind and intensity by these natural social values of the land is clear, but there must be a distinction made between values that are actually created by human activities and the natural potentialities of the land.

That there are two kinds of values in land is recognized by all economists familiar with land

problems. One of these values is inherent in the geological and geographic character of a given area, while the other is clearly the creation of the social needs of the people and the legislative control of land which makes the satisfaction of these needs possible. Let us for a moment pause to analyse in more or less detail the factors that enter into the creation of land values.

They may be outlined as follows:

Geological
- Composition of soil for agricultural purposes
- Composition of soil for structural purposes
- a. Difficulties of construction
- b. Building material on the land
- c. Drainage
- d. Water supply
- e. Grade

These factors are of the utmost importance in what might be called raw land, but as the concentration of population increases, the geological condition plays a decreasingly important rôle regulating values and prices of such land until it reaches a point when it is hardly to be considered, as is the case in large and highly urbanized communities. Problems of construction and grade are however difficult to eliminate. Sandy or rocky soil presents difficulties in the construction of foundations. The grade makes the transportation of building materials, the height of foundations, the method of retaining soil by walls or other means, and the arrangement of rooms worthy of consideration from both the economic and structural points of view.

Geographic Factors.— Considering geographic factors in their broadest possible sense we find land values affected by the following elements:

Relation to Physical Environment	Vegetation (shade) View — open spaces, river views, view of mountains, hills, woods, etc. Facilities for access to navigation route
Relation to Populational Centers	Location in or proximity to large city Location or proximity of small or satellite cities Location in or proximity of suburban communities Transit — frequency, speed, cost, comfort and time necessary to reach certain points Likely increases in population at given points related to a given land area

The above factors are sufficiently obvious to require no detailed discussion. They are invariably considered in the land market and the price of land is fixed to a very considerable degree by the relation that a certain area has to actual or potential populational groups to be settled upon or in the vicinity of such areas. That the supply and demand for land is frequently wholly out of harmony with the actual need for such land is obvious to anyone familiar with the many so-called booms, which are stimulated artificially by land speculators who take advantage of a psychological moment, and by ambitious community boosters to inflate values of land

and dispose of them to innocent investors who must eventually pay for this inflation.

Social and Economic Factors

- Special adaptability to industrial or business use or proximity to land so adapted
- Proximity to places of employment, education, recreation, culture
- Location in or proximity to areas occupied by social classes which would give the occupant of a home on such land a certain social prestige — Fifth Ave., and Riverside Drive of New York City.
- Building standards, legal or traditional, which would protect prospective owners

Following the economic and social factors, land prices are not in the least independent of the character of development which the local government and individual property owners have carried through or are about to carry through.

These improvements may be classified as follows:

Public Improvements

- Roads
- Sewers
- Water supply
- Playgrounds and parks in neighborhood
- Street lighting
- Fire protection
- Police protection
- School facilities in neighborhood

These are essential and they increase in value-producing power relative to land as the community becomes intensively urbanized and the need for

these facilities increases. It is obvious that sewer and water are left in the hands of individual owners as the density of population decreases and that all of the facilities above outlined become more essential as the density of population increases.

Aside from these more essential value-producing factors in the fixing of the price of land the whole problem of city planning, the mistakes of the past in failing to protect land areas and other real property by zoning schemes, the failure to regulate the heights of buildings, the absence of legislation for the control of the condition of repair and general sanitation of old structures, the invasion of certain areas by large immigrant groups considered undesirable by the native or older residents, the renting of homes to Negro families and other similar factors in a given neighborhood will deteriorate the land values regardless of the more or less fixed factors which we have alluded to above. That these factors affect the value of buildings located in areas affected must be conceded, but the buildings can frequently be removed or changed to meet new needs, while the land must remain subject to the conditions which surround it and the purpose for which it is to be used to advantage is fixed always by these conditions.

We have endeavored to single out the more important factors which determine land values. We have also endeavored to show that there is a point in the use of land, or the demand for its use where the inherent value of the land ceases and its value as created by human activities begins. It is at this point that a national policy of land reform in the interest of housing should begin.

Beyond the point where potentiality in social value ceases, and social activities create new and entirely independent values, society should be entitled to the enjoyment of the advantages accrued from their activities so that they may enjoy the largest possible freedom in their use or receive payment for the service which they render. It is this service which the single taxer considers the sole source of revenue and the only true social value which the individual is at the present time permitted to confiscate and monopolize, at least in part, for personal gain.

The tax reformers and philanthropists have long ago given expression to the need for a greater freedom in the use of land by compelling owners to use it themselves or giving others the opportunity to use their holding. The city planner, however, was the first to feel the social significance of the land problem and its relation to the people. It may be said without fear of contradiction that the city planner is doing at the present time as much for the solution of the land problem as has been accomplished within the last century in the field of land tax reform. The methods whereby the city planner is accomplishing these results are not in contradiction to the single-tax principles. They are amplified and adjusted to the broader social needs of modern community building and have a due regard not alone for the access to the land but to the control of its use. It is obvious that if land values are largely social values they should be amenable to the most rigid social control consistent with economy and social welfare. This is the task that is now being accomplished.

If we consider land from the point of view of its urban use — habitation, industry, commerce — its value is almost nil without certain improvements. Its agricultural productivity is not to be considered and its social value is clearly dependent upon its own improvements or those upon adjacent territory. The town planner is endeavoring to reduce improvements to their simplest terms, and so distribute them as to reduce land cost by a saving in improvements without hindering their social value. The construction of wide streets and costly pavements is confined to such sections as need and are dependent upon these improvements for their use, while the simpler types of improvements consistent with residential sections are placed where they are sufficient to meet local needs.

Having reduced the burden of the land cost by a reduction in the land improvement cost, the city planner turns his attention to the necessity for a free use of land for public improvements and the placing of the responsibility of the cost of this improvement upon those most benefited. In line with this effort is the excess condemnation method of land purchase and use for public purposes. This method of condemnation entails *the purchase by the governmental authorities of the land needed for the improvement plus an additional amount adjoining the contemplated improvement so that the values accrued from the improvements would be paid for from the actual sale or rental of land secured in excess of what was actually needed for the improvement.*

The governmental authorities which have made the purchase may dispose of the excess land acquired permanently or for a specified time, and

from the revenue pay for the whole improvement or whatever share may be covered by the revenue secured. There is a two-sided benefit to the public from excess condemnation. One gives the community benefits equivalent to the values created by a specific improvement, and makes the benefited land pay for it; the other, in the case of a public improvement, where the adjoining properties may be injured in value, the acquiring of excess land would protect the property owners and compensate them for losses in accordance with values at the time of condemnation. The question of providing for the protection of the public against the payment for improvements which benefit only a part of the community are no more important than the protection of land owners who may be injured by an improvement which is a social necessity. Excess condemnation meets both these contingencies.

Land speculators and the more conservative elements among the city planners do not hold that excess condemnation is an efficient method to be applied as a general principle of city planning. The argument of the former is based upon his own personal interest while that of the latter is based upon the failure of excess condemnation in England and in France. A careful consideration of the results so far obtained in both these countries clearly shows that the failure was due to a poorly organized method of handling the business end of the transaction, to the too-ready element among the private citizens and public officials to cheat public interest, and to a lack of moral responsibility where public finance is concerned. That such is not the case where these antisocial personal elements do not exist is evident from the success with which

Belgium has been able to use the excess condemnation procedue for the benefit of the esthetic development of her cities, and in full justice to public interests. Failure to enforce a sound democratic principle is no proof of its inefficacy. As soon as effective machinery for the application of the excess condemnation principle is developed we shall have a basis of judgment. The example of Belgium is proof of its soundness.

Taxation is a well-known deterrent in all economic enterprise. All new street openings of a type that tend to increase land values, and that are costly, add to the burden of taxation. Under these conditions public improvements can be made only when the demand becomes popular and generally after conditions detrimental to health, comfort, safety, and civic improvement have developed. Under excess condemnation the improvements will be made as they are needed and the cost distributed among those most to be benefited.

A reduction in the land cost due to a reduction in improvements, and a keeping down of the tax rates by placing the burden of cost of improvements upon properties benefited, is clearly in line with the single-tax idea of giving the land back to the people.

The whole trend of modern taxation is in the direction of control of monopolistic values and the return to the public of all values created by it. This is the underlying principle of the land tax.

Land values are created by intensity of land use. A tax on land tends to increase the amount of land available for use, while social reformers and particularly city planners are trying to bring about the same result by restricting the intensity of land

use. The two methods although aiming at the same results are accomplishing, or would accomplish, their purposes by different means, the former by confiscation, the latter by prevention.

It is conceded that to tax land is to make it difficult to keep it out of use as it must be made to pay for its maintenance at the rate at which the same land would if used to its fullest capacity. This, our single-tax friends contend, would produce a boom in construction and would improve the housing conditions aside from increasing opportunities for labor. It would also result from the single tax that homes would be relieved of taxation. In an open country where a new community is being established the system of single tax might be sufficient to maintain a proper balance between land use and land values. Unfortunately, however, most of our cities have already been built and many of them are in process of reconstruction. Mistakes of planning and taxation have been made and the large task of the day is not the building but the rebuilding of cities.

Let us take as an example any city in the United States. It will be found that in those sections of the city where land is used most intensely and where the largest amount of the community's business is transacted are large tracts of open land that are being kept out of use either for speculative purposes or because of unusual conditions due to personal ownership. The broad application of the single tax would undoubtedly render impossible the holding out of use of such lands. This, however, would be only in proportion to the actual value of the land. In other words, if the land is located in the center of the city, and is valued at one million

dollars per acre, it will be less possible for the owner to hold it out of use than it would be possible under the same conditions for an owner of a similar area where the values are only one thousand dollars per acre to hold his property out of use. It is obvious, therefore, that the application of the single tax on the basis of assessed valuations, without actually confiscating the land but merely charging a rate commensurate with its potential productivity, would from the point of view of the two owners act differently in each case. Where congestion already exists more congestion would be made necessary, while in the sections where congestion has not developed and the owner is not compelled by exorbitant taxes to dispose of or use his land he could still keep it out of use.

It is obvious from the above that nothing short of confiscating all land values will render the even development of all land possible or necessary from an economic point of view. Our contention is that the application of the single-tax principle as such would increase congestion where congestion is greatest and would afford an opportunity to land holders in the districts where values are lowest to keep their land out of use until such time as the increased tax due to increased congestion in the neighborhood would make a continued idleness of such land uneconomical.

The increase of congestion and the intensive land use where the tax is highest are decidedly undesirable from the social point of view. If a land area is taxed on the basis of three-story buildings, and the increase to a four-story does not imply an increase in taxes for the additional development, it

is obvious that taller buildings will be encouraged. One is tempted to believe that land sweating would be stimulated where it is least desirable, and tax rates would be constantly falling behind the rate of development because of the desire to derive the greatest revenue from the smallest area. It will be objected that there will be a great plenty of land available, and that therefore congestion would not be necessary. The facts, however, show that although today there is a great supply of open and comparatively free land, its relation to industrial life and social intercourse is such as to keep it automatically at a low value and out of use. It is a truism to say that the commercial value of congestion is far in excess of that of free space and sparse population.

In emphasizing the tendency to congestion that the application of the single tax would bring about, we should also point out the fact that the high land tax in the congested section would of necessity be such as to compel owners to compete with the outlying districts in order to obtain the highest possible revenue from sources which depend upon the total population, which is a more or less fixed quantity.

From the economic point of view, the holder of small and comparatively cheap land areas, who has not the means to speculate, will be placed in a position where his land will have to be sold at a very low price unless he can obtain the necessary capital with which to develop it. The application of the single tax will so increase the demand for capital, if the prophecies of the single taxers are true, that the poor man would be the last to have an opportunity to purchase such capital in the open market.

That such a condition will stimulate monopoly in land because of forced sales is clearly evident.

Another danger of a rapid real-estate development due to the land tax in our cities may be found in the necessity for using land with a view to meeting tax needs rather than market needs. An examination of many of our cities will show thousands of homes unused, either because there has been a tendency to overbuild, or because the demand for certain types of houses has been overestimated while that of other kinds has been underestimated. This is true of New York, Boston, and Philadelphia at least. The great error seems to be found not in insufficient building but in bad building and unmarketable building.

We have endeavored, in the limited space available, to point out some of the difficulties, from the social and town-planning point of view, that the single tax presents. These are not beyond control. It is surprising, however, that the method of controlling its evil aspects should come from the town planner rather than from the tax reformer. A system of taxation that stimulates congestion is obviously a bad system. Its evil manifestation lies not in stimulated land use, but in failing to provide for a maximum intensity of land use, so that values would be kept at the lowest possible level. This can be and has been accomplished in some instances by limiting the height of buildings in accordance with certain community needs. This type of control has been found most effective in establishing a maximum and minimum standard of land use, and has made it possible to fix land values in such a manner as to prevent decrements as well as undue increments.

A recent investigation in New York City has shown that the undue concentration of the business of the city was due to a failure to control heights of buildings, and that the effects of this failure to control heights have been found to manifest themselves by hampering efficient administration of law, an undue increase in the cost of fire and police protection, and above all by a lowering of the standard of sanitation which has affected the lives of the wealthiest people. What I have sometimes referred to as "the slumification of Wall Street" has rapidly spread over the entire business section of the community and the reaction is only beginning to set in. It has been found that not only do land values reach a point of diminishing returns as the intensity of their use increases, but that a spreading out of business areas is not altogether incompatible with good business.

If the land tax is to affect social conditions in a manner that would avoid the present congestion and aid in the spreading out of the population, a limitation of heights of buildings is imperative. As an auxiliary to the limitation of heights, we must call into play a classification of community activities according to their building needs and the effects that such building is bound to have upon the neighborhood. This classification should determine the location of the buildings in which these businesses are to be conducted resulting in a clearly defined zoning system established along the lines of human activities, and the relations of the people to these activities. This zoning would create business, manufacturing, and residential districts with permanent character and not subject to fluctuations in values such as are so frequently responsible for

speculation in land and undeserved decrements in land values that are a social loss and a danger to the individual investor.

A further adjunct of the land-tax system would be the limitation of number of buildings and dwellings to the acre, and a limitation of occupancy of land areas. Ten to fifteen homes to the acre, as compared to the present average of from thirty-five to forty, would call into use large land areas, and while the single-tax system would force the people to use their land, another legal requirement would provide a demand for such land by a limitation of the intensity of its use. It is obvious that a city with an average of twelve families to the acre would expand and use a larger land area than a city with an average of thirty-five homes to the acre. This expansion would avoid the possibility for land monopoly due to forcing land into the market, and at the same time would vastly improve the present sanitary standards of our urban life, the greatest evil of which is congestion.

The above reasoning leads to the conclusion that land values must be reduced by an increase in land taxes but that this increase in taxes carries with it social dangers that can be avoided only by a system of restrictions of heights of buildings, a zoning system and limitations of the intensity of land use consistent with economy and with the sanitary and social needs of the people of our cities.

From a thousand outlying districts and from distant countries the people of our cities are coming. Many of them are sacrificing a life of comfort and healthfulness and endangering their very existence because of their desire for opportunities which the city alone can afford. The city's gates

shall not be closed in the future as they have been in the past, but its roads, its many tentacled transit lines and waterways shall reach out in the open country and embrace many of the now idle fields and woodlands, and bring back to the city dweller the sunshine and purity of the country air. Thus an urban civilization will be developed that will increase human efficiency, while the amenities of life of the open country will be given a lasting place within the City's Gates of Golden Opportunity.

CHAPTER IV

LEGISLATION

THE history of Housing Legislation in the United States is difficult to trace, not so much because of the absence of evidence of the existence of such legislation as because of the rather faint lines of demarcation between what is ordinarily called "nuisance laws" and the laws regulating the construction and maintenance of homes.

As far back as 1842 Dr. John H. Griscom, Inspector of the Board of Health of the City of New York, submitted a report to the local aldermanic board in a pamphlet entitled *A Brief Review of the Sanitary Conditions of the City*. This report, however, did not produce the desired results, nor did the investigation carried on by Robert M. Hartley, Secretary of the Association for Improving the Condition of the Poor, bring about the desired legislative enactments. It was not until the "Council of Hygiene and Public Health" was organized in 1864 that legislative enactment was projected. The Metropolitan Board of Health of New York City was established under the leadership of this new organization, and in 1867 the New York state legislature passed the first Tenement House Act which was intended to meet the growing problems of congestion and sanitation in New York City.

It is rather significant that despite the fact that in 1856 a committee of the state legislature was appointed "to make an examination of the manner

in which the tenement houses are constructed in the City of New York and report the same to the legislature, and also what legislation, if any, is required and necessary in order to remedy the evils and offer every protection to the lives and the health of the occupants of such buildings," the task of promoting such legislation was left to local organization. The report of the legislative committee, although favoring a tenement house law, never was translated into legislative action.

As the New York Tenement House Law has been used as a model in many of the cities of the United States, and particularly because both the desirable and undesirable features of this law in its various phases are still dominating much of the legislation already enacted or contemplated in this country, one is justified in venturing a general criticism of this law as it has affected the housing legislation of this country.

Beginning with the Tenement House Law of 1867 and ending in the passage by the New York legislature of the Tenement House Act of 1901, which from the point of view of direct restrictive legislation was epoch making, the tenement seems to have become the dominant object of legislative control. Throughout the agitation for housing legislation, the example of New York, a city of multiple dwellings, has been followed in practically every law enacted during the last two decades. The one-family house, which all housing reformers are agreed to as being the ideal for American communities, has been left, in most instances, without adequate regulation beyond such provisions for safety as the fire underwriters on the one hand and the nuisance laws on the other have made necessary.

While the promoters of the New York Tenement House Law have set perhaps the highest standard of tenement construction obtainable anywhere in the civilized world, the very success of the law has been a serious obstacle to constructive housing legislation which contemplates general housing restrictions of all dwellings, whether single or multiple.

The fundamental difficulty in the way of building up a constructive national housing policy, supported by adequate housing legislation, has been the point of view of those back of the original movement. The conditions under which this point of view was developed were a tenement city — New York — growing rapidly beyond its capacity, and an overwhelming influx of foreign peoples whose standards of living and economic status require immediate action in the interest of what was considered, at the time, proper American standards of living. Approaching the problem from the point of view of the charity worker and the reformer, the pathological aspect of housing as manifested in the congested, insanitary tenement received our first consideration. A minimum standard of construction and maintenance was therefore established and machinery for the enforcement of such a standard was devised and effectively put into operation.

In going through the records of the various investigations in New York and in other parts of the United States one is impressed by the wealth of evidence of the existence of poor housing conditions. From the study of more than two score of printed reports relating to housing conditions in cities of over fifty thousand population it is apparent that the abnormalities and the failures in housing are emphasized. In none of these reports, how-

ever, have the social and economic conditions been considered responsible for the creation of housing evils.

It is also evident from an examination of the various reports on housing conditions, and the laws and ordinances which they have stimulated, that the standards established are wholly conventional and based upon common consent, regardless of the more important scientific bearing that such regulations may have upon the rate of construction of various dwellings, the rate of deterioration, the effects upon health, city planning, etc. We might safely say that all legislation relative to housing, in this country at least, is never free from provisions based upon a liberal guess rather than upon scientific inquiry of an experimental character and in harmony both with the laws of health and the laws of economics. Throughout the technic of housing legislation has been social rather than sociological and its content has formulated our experience, but experience has not always formulated laws.

This absence of scientific data upon which to base housing regulations has been the most potent obstacle in the way of uniformity and adequacy of housing reform. The number of cubic feet of air space per person, the size of rooms, the depth of courts, the size of windows, waterproofing, adequacy of ventilation, and other similar provisions found in housing codes are still loose terms used with the best intentions and with the least amount of scientific evidence as to the adequacy of these provisions both in terms of sanitation and economic cost. As the initiative in housing legislation passes out of the hands of housing reformers, and as new methods of promoting the construction, ownership,

and maintenance of houses are devised through legislation and by private enterprise, the present standards of control are bound to be changed so as to be more in harmony with modern needs.

Law ordinarily is negative. It is intended to curb our impulses, to control our relation to others, rather than to develop our initiative. It is static rather than dynamic. What is true of law in general is especially true of housing legislation in this country. It is only when legislation becomes dynamic, comprehensive, scientific, constructive, and promotive that the reforms it proposes to achieve become practical, effective, and progressive.

It is probably true that so far as control of privacy, safety, and sanitation in the construction of new houses, and to a lesser degree the control of similar factors in old structures, much has been achieved in the last two decades and more will surely be accomplished under the stress of the war and the growing recognition of housing as a factor in industrial efficiency. All this achievement, however, has a relation only to housing as a commodity in trade. It controls neither the price nor the supply of houses and has not the slightest relation to the protection of investments, the supply of capital invested, the possibilities for home ownership among the masses, the possible cost of a high standard of maintenance or any of the numerous conditions of social and economic community development in which the home is the prime and most permanent factor.

A survey of the conditions which control the character and supply of homes, as well as the extent of possible home ownership in the community, leads far beyond that limited field of houses so familiar

to the American public and so widely recognized as an essential and possibly the sole means of housing reform.

In an earlier chapter in this book we have pointed out the essentials of economic factors in the construction and maintenance of a home. It will be remembered that these factors are land, capital, labor, materials, maintenance, and community improvements. That all of these are capable of legislative control will be shown presently, and that this legislative control could be crystallized into formulae which would act as a stimulus rather than as a deterrent in the construction of an ample supply of homes of high standard will also be considered. It must be shown that all that is necessary to develop the field of constructive and dynamic housing legislation is to crystallize economic and social principles, long recognized in the fields of sociology and economics, into terms of housing legislation. This has already been done in some of the countries of Europe, such as France, England, Belgium, Italy, and Germany.

Legislation Relative to Land.— Legislation for the control of land to be used for housing purposes should relate to the following: regulation and control of prices, adequacy of supply and safeguarding against future deterioration of values.

According to the United States census of 1910, metropolitan cities of the country occupy 0.062 per cent of the total area of the United States and are inhabited by 18.59 per cent of the population of the country. Going a little further into the statistics of land we find that one-third of the population of the country. Going a little further into the statistics of the total area of these cities is only 0.123 of the

total area of the United States. If we exclude all areas incapable of being occupied there is still enough land in the United States to afford every man, woman, and child twenty acres and still accommodate the peoples of Belgium, France, and the British Isles. Under these conditions land values are not created by the law of supply and demand but by artificial means wholly dependent upon the methods applied in the development of communities and the control that is placed upon the intensity of land use. Just as we created high land values by permitting intensive use, as was done in New York and even in the smaller communities of this country where congestion and tenement construction has been permitted, so by limiting land sweating, by the control of the amount of land to be used for each dwelling, and by restricting the intensity of the use of land for individual dwellings or other structures, larger areas would be called into use and land values would of necessity be reduced. The recent efforts in the direction of controlling the heights of buildings is the first recognition, from a legislative point of view, that building heights are both a social and an economic problem which the communities must control in order to stabilize values, solve the problems of traffic, reduce the cost of fire protection and policing, as well as the inflation of land values which mean stagnation to construction and a sort of "arterio-sclerosis" in the entire functioning of the community.

The single tax, or the land tax which means the taxing of land and the exemption of improvements from all burdens of taxation, has for some years preoccupied land reformers who have had in mind a

general reform of our social order, rather than the improvement of housing conditions. Incidentally it has been argued that a land tax as such would stimulate construction, but that by no means would it guarantee the construction of homes suitable for the needs of the people, or be in any way in harmony with a broad constructive policy of home building and home ownership. A wise system of taxation that would reduce the value of the land by the mere confiscation of its speculative value, when coupled, however, with such restrictions as limitations of use, and a zoning scheme consistent with the needs of the community, would contribute very materially towards the driving into the market and out of the field of speculation of much urban area which would become available for the construction of homes at a low cost to the prospective home builder and owner.

Should the cities couple with their general housing legislation a scheme of land taxation that would relieve homes from the burden of taxation and reduce land values, much could be accomplished in creating an ample and cheap supply of land. Many cities in the United States are slowly developing a system of taxation which is shifting the tax from the improvement to the land and no less important a metropolis than New York City is now undergoing a change in its tax system according to this plan.

That the supply of land is limited in individual communities is evident to anyone, but that this supply needs to be considered in terms of specific governmental units such as New York, Boston, Chicago, or any other city, is doubtful. The expansion from the point of view of territory of many

cities is being seriously considered by every community which is growing in population. The suburban development of all the large cities and the practical and gradual abandonment of the metropolitan centers as residential centers is manifesting itself throughout the entire country. Satellite rural and urban communities are extending their limits to meet the congested limits of the large populational centers, and governmental units are in self-protection endeavoring to absorb the outlying areas in order to save themselves from bankruptcy due to the deterioration of urban-property values on the one hand and to keep up the normal growth of population in proportion to the increasing rate of business activities.

It is only through the expansion of corporate limits and a revision of the methods of such expansion under advantageous conditions which would afford outlying areas special inducements of taxation, more adequate service in transportation, cheap facilities for the improvement of local areas, etc., that outlying metropolitan districts will be willing to become part of the larger central municipal units. This can be done by preserving for each locality a certain amount of governmental autonomy and protection against the more experienced and no less dangerous political machinery that metropolitan centers have developed in years past. It is certain that a suburb of Philadelphia would not be willing to hand over its destiny to the political machine of that city without being apprehensive of the danger that such a step might entail. Should the municipalities be free to make definite agreements with their satellite cities and suburban areas, a new era in their

development would come into being and vast resources of land would be opened under the advantageous conditions of large municipal public service without the danger of political corruption and inefficiency characteristic of many of the larger centers.

One of the most serious housing evils has been the shifting of property values because of changes in the character of neighborhoods. Residential districts become infested with objectionable industrial plants and business districts become the victims of manufacturing or transportation centers located in their midst to meet a temporary need or, as is often the case, merely for the convenience of a particular owner or group of owners. The recent loss of over $21,000,000 in property values that occurred in the district of Twenty-third Street and Fifth Avenue of New York City is a good illustration of the effects that the encroachment of a given industry — clothing manufacture in this case — may have upon the value of real estate when it is not protected by a zoning system that controls the use of land in given areas according to the original or most fitting purpose for which a given area is best suited.

There are at the present time zoning laws in a number of cities in the United States. These are, however, artificial and partial in most instances. Zones as to type of activity, such as residential, business, manufacturing, are well recognized, but their permanent establishment by law has been slow and hesitant. In some instances we find local ordinances establishing zones on the request of property owners within a given area such as a block or a street, while in other instances, as in Minneapolis, the zones are city-wide, but are not character-

ized by that breadth of vision that is necessary to fix the character of large areas and protect them against encroachment which goes beyond the limited percental basis of the properties already developed.

An adequate zoning scheme should recognize the present and potential values of property on the basis of their adaptability rather than the possibility of use for a given purpose. It should recognize the present as well as the future trend of development of given districts; it should tend to stabilize values in the community as a whole rather than enhance values in a given district; it should avoid any undue classification of residential districts which would create a stratification of types of dwellings according to their economic value; and it should relate such districts to the amenities of sanitation, play, and comfort provided by the community with a view to benefiting the largest possible number of the inhabitants.

It is only under such a system of zoning that values of land become stabilized and investments in land, and subsequently in the construction of homes, is safe.

Municipal Ownership of Land.—To reduce further the possibilities for speculation in land, German municipalities have come to realize that municipal ownership of land, which could be sold and utilized for housing purposes, would keep land prices down and promote the construction of homes. This has been done in various degrees, but the most conspicuous example is the city of Mannheim, which owns more land than the combined ownership of all the land owners in that municipality. The result has been a well-developed and an exceedingly well-housed community.

In the United States constitutional objections have been raised to the ownership of land by municipalities. The most important instances of such objections have been caused by the attempts to condemn more land than was necessary for certain municipal improvements in Philadelphia and in New York, with a view to utilizing of the condemned areas only what was needed for the improvement contemplated and reselling the excess remainder to private owners at the increased value which has accrued from the improvement. This is the method described as "excess condemnation." In both Pennsylvania and New York this method of procedure was declared unconstitutional and it required an amendment of the Constitution of the state of New York to make it possible for New York City to apply a method, widely recognized as effective, just to the mass of tax payers not benefited by a particular local improvement, and proved to be practical in England and especially in Belgium, where most public improvements are made by excess condemnation so that all properties adjoining an improvement and benefiting thereby would pay the whole, or at least part, of the cost of such an improvement.

While the process of excess condemnation has no direct bearing upon the cheapening of land for housing purposes, it is one more method of land control that places the burden of taxation for local improvement where it should be, namely, on the land values accruing from such improvements. This naturally tends to reduce the possibilities for land speculation and establishes the principle of trading in land on the part of the municipalities. With this principle recognized, it should not be diffi-

cult to take the next legal step and develop a system of municipal ownership of building areas, which could be sold at reasonable rates, with preferential conditions for housing purposes.

An adequate legislative land policy, therefore, which would be effective in bringing into use ample and cheap land areas for housing purposes should, as suggested in the foregoing, place the burden of real-estate taxation upon land on the basis of its potential productivity. It should restrict the intensity of land use by a limitation of heights of buildings, and a graded regulation of the amount of land to be occupied by buildings, out of a total building lot. It should establish cooperative relationships with outlying suburban districts with a view to opening up new areas with the advantages of large urban centers. Municipalities should be permitted to acquire and sell land for housing purposes and an effective zoning system should be established in order to stabilize land values.

Laws Relating to Capital.— There is no more difficult task before the prospective home owner than the financing of the purchase or construction of a home. With limited or no credit in the money market, with little or no knowledge of the intricacies of financial methods, the prospective home owner is at the mercy of the speculative builder, who must derive a profit for himself and all those who in any way assisted financially or otherwise in the procuring of the facilities for the financing of a housing scheme. Aside from the high rate of interest charged by the banks there is a series of profits for promotion, so that the difference between the creative cost of the home and the ultimate cost to the owner and occupant ranges from 20 to 35

per cent of the purchase price. This condition is largely responsible for the small proportion of home owners in the cities of this country, although it must be recognized that where the multi-dwelling of the tenement type prevails, ownership is of necessity reduced to a minimum, since the purchase of an apartment in a multiple dwelling is impracticable except where cooperative ownership of a whole building on the part of the tenants is made possible. This method, however, has never reached beyond the borders of Germany.

The essential needs in the financing of homes, and especially wage-earners' homes, are a cheap, ample, and long-term loan capital which would be available to individuals whose assets are a normal earning capacity, a small savings fund and possibly a certain stability of residence. The ordinary money market is not disposed to encourage loans under these conditions. Sure, quick, ample, and well-secured returns are the slogan of banking and other money lending interests.

The only method of doing away with this very fundamental difficulty in the way of adequate and fair financing of housing is through legislation which will permit municipalities and the state to grant loans for the construction of individual homes under definite restriction. A method that has proved itself effective has been the imposing upon banking institutions of certain conditions which compel these institutions to invest in loans for housing purposes a certain percentage of their deposits and under conditions favorable to the prospective home owners. The plans of France, England, and Germany of affording at a low interest rate — as low as 2½ per cent in Belgium — from 50 to 80

per cent of the capital required for the construction of homes could perhaps be applied to America. The national, state, and municipal governments should cooperate in such a scheme of financing of homes with a view to reducing the financial burden upon any one of the governmental bodies and create ample checking facilities which would obviate fraud and be just both to the banking interests and to the prospective home owner.

The Federal Government in the recent crisis has found it necessary to finance the construction of wage-earners' homes in order to provide accommodations for the workers engaged in the production of war material. This is the first act of the American Government which recognizes the need for government action in the financing and construction of homes and it promises to establish a practice sought by some housing reformers in this country. The danger lies, however, in the failure to develop individual initiative among the workers themselves and in federalizing all housing activity, which is essentially a local problem and a local responsibility. Whether this will lead to the further development of government action extending to the states and municipalities remains to be seen. The precedent so effectively established by France, Belgium, England, and Germany should prove of value in the development of a national policy of financing that would distribute the responsibility and develop cooperation between the local community, the state and the Federal Government. On the whole it may be stated that we are rapidly moving towards a recognition of the need for public funds for private housing enterprises; that the government, whether it be municipal, state, or fed-

eral, can obtain loans at a much lower rate than individual or financial institutions; that they can grant long terms and that they have or can obtain authority to control the investments in housing so as to raise the present standard of sanitation, comfort, privacy, and attractiveness which would affect the home life of the people of this country. The countries of Europe have proved that such methods may be made effective. Bearing in mind local needs and local conditions, a financial policy in the interest of ownership of homes of a high type can be developed without risk of destroying individual initiative and without danger of developing a paternalism that is distasteful to the American people or inconsistent with the policies of government interference as found in the farm loans, industrial and sickness insurance, etc.

Labor and Materials.— There is little by way of legislation that would assist in reducing the cost or in increasing the efficiency of the labor supply employed in the construction of homes. The only method of reducing the cost of labor would be by a simplification of the legal building requirements so as to meet the needs of individual types of houses. So far the classification of buildings has been based upon a maximum of safety and a minimum of sanitation. A law covering the first is in most instances necessary, but the question as to maximum load that a floor is to carry, the fireproofing and general combustibility of materials, the depth of cellars, and other similar questions are still settled on a basis that is too highly generalized, and which could be changed by further inquiry into the actual needs of buildings of various sizes, height, and location. State-wide or possibly national com-

missions appointed by legislative bodies to inquire more minutely and more scientifically into these matters present a field of legislative enactment that should prove invaluable from the point of view of economy both in labor and in materials of construction.

Hand in hand with the standardization of various factors of construction involving labor cost is the problem of choice of materials which would render a maximum of service at a minimum cost. Many city regulations prohibit the use of hollow tile, because technically they are not safe materials to be used in the construction of homes. Experience where such materials have not been prohibited shows that hollow tile is cheap, and that the rate of construction from the point of view of labor is lower than where brick or other similar materials are used.

The fire zones so frequently established in municipalities are not wholly in harmony with the needs. The menace from fire that such buildings constitute is not infrequently overestimated, with the result that the cost of construction is enhanced beyond the actual needs of the community. The fire underwriters have seen to it that a high standard of fire protection is maintained, but in doing so they have not had the cooperation of unbiased, scientific advice which would protect the financial interests of the owners as well as the interests of the fire underwriters.

Another element of importance in reducing the cost of building materials is the high tariff rate placed upon building material imported from foreign countries. This was especially true prior to the last revision of the tariff of this country. It is,

however, true that even today, despite the shortage in building material in this country, the tariff rate on such materials is entirely too high for the protection of the building interests of the country and especially for the prospective owner of the small home.

A national commission made up of socially minded and technically trained persons, with authority to investigate the facts and formulate legislation, would be invaluable in reducing the cost of labor and materials necessary in the construction of all and especially of small homes. It is barely possible that the work at present carried on by the Federal Government in the development of plans for workingmen's homes will partially solve the problems of labor and materials.

Maintenance.— From the legislative point of view the largest cost factor in maintenance is taxation. This is sometimes most unfair to the small home owner whose property is mortgaged. Such property is not only subject to the regular municipal tax on real estate, but the owner is also compelled to pay directly or indirectly a tax on the mortgage. This would seem to be an unfair and unnecessary hardship on the owner, especially when the financial burden of paying for the home is already heavy. The exemption from taxation of all mortgages on residences, and the possible exemption from taxation of certain types of homes costing less than two thousand dollars, would act as a stimulous in increasing the supply of such small homes and would facilitate ownership. Such taxation need not be permanent. It may be limited to a number of years corresponding to the time required for the payment of the homes or a specially

fixed period of from five to fifteen years, depending upon the original cost of the home and upon special local conditions. The general problem of maintenance from the point of view of safety and sanitation is generally provided for in the ordinary housing or sanitary codes of the cities and states, wherever such codes have been enacted. That there is much room for improvement along this line of legislation is hardly to be doubted.

Community Improvement.— The street construction, the placing of sewer and water supply in the streets, the laying of sidewalks, the planting of trees, are all problems of finance which are within the province of legislative control. The assessments upon property owners to cover the cost of such improvements is frequently burdensome and wholly out of proportion with the resources and the value of the property affected by these improvements. It is frequently a question whether certain areas can pay for such improvements or whether they should remain without them. The assessment is often made in one lump sum, but the city may be placing these improvements with money obtained by bond issues and payable over a period of years. It would seem that the methods of assessment for such improvements could be regulated by state or municipal legislation so as to give the individual owner a longer time during which to pay for such improvements, and during which period a rate equal to the rate of interest paid by the municipality would be charged. Such a system would afford greater opportunities for securing adequate surroundings for the poorer sections of the community and the cost would be paid out of profits as the value of the property is enhanced. From the point of view

of maintenance and improvement of old properties it might not be out of place to add that what holds true regarding the financing of new structures with federal, state, or municipal funds might be true of the financing of the reconstruction and improvement of old buildings, which through neglect or advancing standards need certain changes which would vastly enhance their value and increase the supply of adequate homes in a given community. This experiment could be tried at no time with better justification and perhaps with greater success than during this period of shortage of homes and an inadequate supply of materials and labor caused by the war.

State or Municipal Legislation.—In matters of finance and taxation the state and local authorities are following well-established principles of jurisprudence which we need not enter upon in this book. From time to time, however, the problem of regulating the construction and maintenance of homes has been a disputed field between the states and the municipalities. Both types of legislation have been tried in this country, but the accumulated experience has so far not been collated to warrant any conclusions as to the advantage of one over the other. It is clear that uniformity in housing legislation within the limits of one state, at least, is essential when we remember that the jerry-builder is ready to take advantage of every failure on the part of particular municipalities to provide adequate protection and to seek the field where least protection is afforded. It is also true that local authorities are not always free to enforce regulations, especially because local political conditions and

special favoritism are more effective where the municipality is in control than where the state assumes the responsibility for the enactment and the enforcement of the law.

In the enactment of housing legislation it is also desirable to resort to the powers of the state because state legislatures meet at special intervals, quite frequently sufficiently far apart to afford a law at least a limited period of experimental functioning. Municipalities are more easily influenced and are more likely to amend or repeal local regulations without an opportunity for fair trial, especially when the enforcement of such a law begins prior to a date of election. Another advantage of state legislation is that it can be enforced by persons whose position does not depend upon local politics, if the enforcement, as is the case in New Jersey, is left in the hands of state officials.

Whatever the conditions, however, there is no justification for permitting each municipality to devise its own housing code without having a state-wide minimum standard established by the state legislature. This should allow sufficient latitude to local communities to meet their peculiar needs and to introduce such high standards as the intelligence and vision of the locality is ready to accept.

To summarize, it is fair to say that while a large mass of housing legislation has been produced in this country during the last quarter of a century, this legislation has dealt wholly with the restriction necessary to obtain a minimum standard of safety and sanitation without regard to the rate of production of such homes, and is in no way related to the cost to the producer and the ultimate purchaser

or ability of either to produce or purchase. We have made progress in establishing certain standards but we have failed to make adjustments which would bring these standards within the reach of the individual owner or potential owner of a home. We have developed a policy of sanitary control which is apt to evolve in the interest of the occupant, but the task still untouched, and the one that will make such standards as we have established of permanent and general value, lies in the creation of a body of effective legislation which will bring the ownership of a home within the reach of every wage-earner in this country. To this task the next decade of housing legislation should be devoted.

CHAPTER V

THE HOUSING SURVEY

THE last two decades have witnessed an unprecedented awakening to the need for providing adequate housing accommodations for the people. The four or more score of studies of housing conditions that have seen the light in the last decade are evidence of the fact that at least a portion of the people of so many communities are willing and desirous of facing their local problem, even though they are neither willing nor able to visualize the situation from the angle which shows our entire national policy of land and housing control to be inconsistent with the best public interests and out of harmony with the legal and administrative machinery, the function of which is to provide such control. The conception of the housing survey has been narrowed to a muckraking process intended to focus attention upon the most flagrant evils, wholly without regard to the social and economic principles which underlie the causes of these conditions and their effect upon the whole of our national housing standards which have created the tenement with all its attending evils. In other words, the housing survey has reflected the conception of housing reform as meaning the improvement of the worst conditions.

Victor Branford has said that "The end of the Social Survey is to make us see Utopia, and seeing create it." What we have done in the field of the housing survey is to so fill our minds and hearts

with the sickening spectacle of the health-destroying slum as completely to confuse the issue of a high housing standard for the nation with the intensive pathological condition which has arisen from a failure to harmonize our methods of housing control with the fundamental principles which underlie an effective, far-reaching and progressive housing policy. From this point of view the housing surveys and housing reform in this country may be classed as a complete failure.

Within recent years there has been considerable confusion between social research and social surveys. Social research as a method of inquiry intended to discover new principles, and the social survey as a process of testing social facts in the light of principles already discovered, have been so seldom differentiated by social investigators that much of a purely superficial and diagnostic character has been mistaken for research, much to the detriment of research as well as to the detriment of the efficacy of the survey in utilizing the findings in the field of research. In setting forth the few fundamental questions relating to the housing survey I wish to emphasize this distinction and to call attention to the vast virgin field of research that relates to the development of sound diagnostic methods in housing survey work and in housing reform.

With the rapid development of our communities by extension of territory, the creation of new communities necessitated by the recent war, the opening up of new areas suitable for industrial, agricultural and commercial activities, and the entire or partial destruction of communities in the war-stricken zone, or because of such calamities as

earthquakes, tornadoes, extensive destruction by fire or flood, the housing survey is rapidly assuming the function of an engineering problem, a problem of projecting inquiries into the future without in any way foregoing its present function as a method of diagnosing existing conditions with a view to applying effective remedies that would tend to remove such conditions at the earliest possible moment.

In the discussion of the method of organizing and carrying on a housing survey there are certain preliminary considerations that should be taken into account. Within the limited scope of this book it is not possible to deal with these considerations, nor is this book a treatise on survey methods.[1]

As the most important work before those interested in the improvement of housing conditions in this country must of necessity be based upon the evidence of existing evils, their extent, character, and cause, it is important to undertake as a preliminary basis for further reforms the examinations of such conditions. This is especially important because the far-reaching influence of bad housing is most widely recognized both by those interested in the welfare of the community for its own sake, as well as by those who calculate their social service in terms of increased efficiency in the daily task of the workers and as a means of reducing financial responsibilities entailed by the maintenance of hospitals, philanthropic agencies, etc., which are intended to take care of the victims of bad housing.

[1] For guidance in the methods of organizing a Housing Survey see *The Social Survey* by Carol Aronovici. The Harper Press, Philadelphia, 1916.

There are three fundamental aspects of housing which should be considered in a survey of existing conditions. These factors are as follows:

1. Character of the home in relation to the family and the individual occupant.
2. The place of the home in the community from the point of view of the relation between individual members of the family to the industrial, educational, social, and leisure-time facilities available in each community.
3. The cost of the home in its relation to incomes, and the distribution of sudh incomes in various grades of families.

It may be stated at this juncture that a housing survey which neglects to consider these aspects of housing conditions is incomplete and furnishes no adequate basis for either governmental action or philanthropic service. It may also be added that these considerations are as important in projecting new housing schemes as in the study of existing conditions.

Considering for the moment those elements that directly affect the health and welfare of the family and of the individuals in each family they present the following classification:

Sanitation	Light Ventilation Congestion Water supply Waste disposal Cleanliness
Safety	Fire escapes — fireproofing Combustible materials in buildings or surroundings Safety of construction and repair

Morality	Privacy (lodgers-overcrowding) Business use of home
Esthetic Conditions	Type of architecture Interior decorations Type of furniture

In the light of the above classification of factors controlling the immediate conditions of the home it seems necessary to discuss briefly the questions that a housing survey should answer in relation to these conditions.

Sanitation

Light.— There is perhaps no more important factor by which the sanitary condition of a home may be judged than light. Land congestion, heights of buildings, orientation of streets, potential facilities for ventilation, the amount of sunshine and the time during which it permeates the rooms, are all intimately and inseparably related to the lighting of rooms. The following are some of the questions that should be asked in this connection in the course of the survey:

a. Are all rooms lighted so that no artificial means of illumination are needed during the day?
b. Is the light reduced by proximity of buildings, bad location of windows, unusually tall trees, poor orientation of the building, unnecessary or too extensive draperies, placing of furniture in front of windows, etc.?
c. Are there any dark rooms in the home and if so in what way could they be made lighter and what structural changes would be necessary?

d. What rearrangement of the rooms would increase the amount of lighting and extend the number of hours of sunshine hours in the various rooms?
e. Are the best-lighted rooms used to advantage?
f. What artificial methods of lighting are used and are they adequate?

Ventilation.—Anyone who has had the experience of visiting homes among the working classes, and especially among the poor, will call to mind many instances of homes that could be ventilated but in which the air was vitiated because of closed windows, many of them nailed down, and a failure to use the ample and simple facilities for ventilation at the disposal of the people. There are, however, many instances where ventilation is impossible, either because there are no means of securing such ventilation or, where the surrounding conditions are such as to preclude the possibility of open windows because of vitiated atmosphere due to fumes from factories, toilet odors, and places used for the storage of waste materials.

Any questionnaire regarding ventilation should relate to the following:

a. What are the means of ventilation — windows, artificial ventilation, shafts, etc.?
b. Are the various means of ventilation used, and if not, why not?
c. What are the heating facilities and are they an aid in securing ventilation?
d. Is the heating method sufficient to allow of a reasonable amount of artificial ventilation?
e. Is the outside air in yards, alleys, nearby manufacturing plants, air shafts and other places such as to make ventilation possible, desirable, and agreeable? What are the sources of air pollution in the neighborhood?

f. Are screens provided so that windows may be opened without danger of home becoming infested by insects? Indicate windows with screens.

Congestion.— Congestion is a relative term and applies to both the sanitary and moral aspect of the home. A small four-room apartment may be adequate for six persons when such persons belong to the same family, and it may be congested when half the members of the household are not members of the family and both sexes are represented. The same apartment may be congested with a family of six persons if all were to sleep in the same bedroom, and the other three rooms to be reserved for other uses than sleeping. It is difficult, therefore, to define congestion from the point of view of the use of the individual apartments. All that can be said is that a reasonable degree of privacy and avoidance of the presence of persons outside of the family are essential.

The following information relative to the individual apartments comprised in the survey should be gathered:

a. Number of rooms and use of each room.
b. Access to bedrooms — whether through a living or another sleeping room.
c. Location of toilets in relation to sleeping and living rooms.
d. Number of persons per sleeping room, according to sex, age, and family relation.
e. Number of lodgers, by sex, age, and relation to family.
f. Size of sleeping rooms, according to number of persons and number of beds in each sleeping room.
g. Use of bedrooms and beds in day and night shifts.

h. Method of heating bedrooms and method of ventilation during sleeping hours.
i. Amount of air space in rooms occupied by furniture or other materials taking up air space in the room.

Water Supply.— There is no more essential commodity in sanitation than water. This must be not only suitable for drinking purposes, but it must be ample and accessible for use in the various household needs. The following should be ascertained relative to the water supply:

a. Is water accessible within the apartment, the hall, the cellar, basement, yard, street, or must it be obtained from some neighboring house or yard?
b. Is the water supply controlled by the municipality or by a private corporation?
c. What test, and how frequently are these tests applied to the water supply, to ascertain its fitness for use?
d. Is there an ample flow of water or is it insufficient and irregular?
e. What bathing facilities are available — bathtub, shower, etc. — and is the water located conveniently for use?
f. What are the means of heating water for bathing or other purposes?
g. Are the facilities for washing clothes adequate?

Waste Disposal.— Under waste disposal should be included all the various facilities for disposing of the waste materials connected with the activities of the home. The following should be known about the ways and means of disposing of the household waste:

a. Is the street sewered and is the home connected with the sewer?

b. What is the type of toilet, where is it located, is it connected with the sewer, and if not, what are the means of disposing of the waste materials?
c. Are the waste pipes in the plumbing trapped and what kind of traps are they?
d. Is the garbage collected by the city and what are the rules and methods of collection? Are they adequate for the needs?
e. Are ashes and rubbish collected by the city or are other methods of disposal employed? Are they adequate?
f. Are there any accumulations of waste present in any part of the apartment or in its surroundings?

Cleanliness.— In considering cleanliness we must recognize that there are two distinct elements that must be taken into account, namely, the conditions of the apartment or building which is the responsibility of the occupant, and the conditions which are strictly a matter of maintenance and which are the responsibility of the owner. Both these aspects should be studied. The following may be ascertained in the course of the examination of each apartment and building:

a. Do the tenants keep their apartments in a cleanly condition, and if not what would seem the cause of the absence of cleanliness — congestion, lack of water supply, poor housekeeping, ill-health, etc.?
b. Are the walls and floors in such condition of repair as to be difficult to keep clean?
c. Are the yards and streets in such condition as to make cleanliness in the home difficult or impossible? (Dirt, mud, etc.)
d. Is the disposal of waste such as to make it impossible to keep the yards and homes clean?

e. Is the lack of cleanliness characteristic of the people or a given group of houses in the neighborhood?
f. Do the occupants present a cleanly personal appearance?

The above are sufficient to indicate the trend of the investigation relative to the sanitary aspects of the home. We have not discussed the details as to special standards, or the technical aspects of plumbing, heating, lighting, etc. These can be easily ascertained from some of the more progressive laws such as those of New York City, Chicago, Minneapolis, St. Paul, and other cities and states which have enacted housing legislation within recent years.

Safety

The fire underwriters of this country have been diligently at work establishing and promoting standards of safety against fire risk, and our laws are to all intents and purposes developed to a degree that is sufficient to reduce the fire risk to a minimum, at least in so far as the combustibility of building materials is concerned. That we are annually losing many buildings through conflagration must be admitted, but this is due largely to failure on the part of owners or tenants to remove the causes of such conflagrations which have little to do with the nature of construction, at least in so far as building material is concerned.

Fire Escapes.— The spectacle of great tenement structures covered with a network of fire escapes is not attractive. So far it may be said that there is not enough accurate information to determine upon the adequacy of the present provisions for fire escapes in tenement buildings. The fatalities from

lack of fire escapes have been very limited, and perhaps all that can be done is to keep what legislation does exist until further light can be shed upon this subject.

The usual questions asked in this connection are as follows:

a. Are the exists from the building adequate in case of fire, so that they may be found easily, without the possibility of access being cut off by fire or smoke?
b. Are fire escapes, where needed, of fireproof construction, easy of access, and easy of ascent or descent?
c. What is the danger of fire cutting off the possible use of fire escapes?
d. Are there any encumbrances obstructing exits or impairing the possible use of fire escapes?
e. Are the spaces immediately adjoining the exit and the lower end of the fire escape free from obstruction, and is it sufficiently open to avoid danger from being cut off by smoke, fire, or fumes?

Fireproofing.— It is a well-known fact that complete fireproofing in residences is impractical from an economic point of view, even though it may be possible from the structural and engineering point of view. The main facts relating to fireproofing may be ascertained from answers to the following questions:

a. What is the material of construction of the home?
b. Are the facilities for artificial lighting of rooms and other parts of the building such as to avoid danger from fire?
c. Are wiring, chimneys, etc. under proper control?
d. Are parts of building unnecessarily exposed to combustion through proximity to stoves, lighting fixtures, heat carrying pipes, etc.?

Combustible Materials in Buildings.— Much danger from fire comes from the storage of combustible materials in buildings occupied for living purposes. While legislation almost invariably controls such storage, conditions prejudicial to the safety of the tenements are found very frequently both inside such buildings or within their lot area. The following information should be obtained relative to combustible materials:

a. What is the character, location, and quantity of combustible materials located in the building?
b. What means have been provided for the protection of these materials against fire?
c. In what way is the building itself protected in case of fire originating from such stored materials?

Safety of Construction and Repairs.— It is impossible to ascertain in the course of a survey the safety of a building relative to its load-bearing capacity, or danger from collapse. All that can be done is to ascertain the outward evidences of danger, such as frail or broken stairs, absence of proper railings on stairs, broken floors, danger from falling brick or other building materials, obstructions in halls, poorly located clotheslines, and other similar conditions which require the discretion and observing ability of the investigator and which could not easily be covered by specific questions.

Morality

It is not safe to assume that where there is no privacy or where there is overcrowding there is necessarily immorality. Immorality is mainly a matter of character and not of habitation. We

must recognize, however, that where opportunities for immorality are greatest, character has the least chances of withstanding temptation. That lack of privacy often leads to immorality should also be conceded. The arrangement of rooms and the use of the rooms are no small factors in this connection.

Privacy.— The first essential of privacy relates to the arrangement of the rooms and the presence of persons who are not members of the family. The facts relating to the problem of congestion as related to the sanitation of the home will be most telling in ascertaining the amount of privacy that is possible in the home.

Business Use.— The conduct of certain types of business either within the individual home or in the same building tends to destroy the privacy of the home, and to bring within the building or yard persons whose character cannot be scrutinized and who may prove a dangerous element to both adults and children from the point of view of their conduct. Gambling, prostitution, the liquor traffic, are often found intimately connected with individual homes to the detriment of the home itself. It is essential, therefore, to ascertain with the utmost accuracy whether any business is conducted within the building used for dwelling purposes and the effect that this business has or may have upon the home.

Esthetic Considerations

So far we have had little if any evidence of an effort to study the aesthetic character of the home and its effect upon the occupants. That all the people have a certain right to beauty, at least in the same measure that they have a right to education,

is coming to be recognized. To what extent this right is being recognized in the development of the home would be difficult to state. That among the wage-earning classes we have failed to recognize beauty as an essential element of habitation is evidenced by the shabby, squalid, ill-kept appearance of most of the wage-earners' homes. Architecturally, all sorts of abortive ornamentation has been used on homes where revenue could be increased thereby, and in very few instances has harmony of line or color or texture been considered. Ornamentation has been kept separate and distinct from the structure itself with the most distressing results. A housing survey might make a material contribution towards housing reform from the aesthetic point of view by a study of certain features of simple architecture present in a given community that have produced the most attractive results without necessarily increasing the cost or reducing the adequacy of the accommodations.

The interior decorations have been overdone rather than underdone. The type of decoration has been of the kind that tended to imitate splendor rather than yield an atmosphere of restfulness and simplicity. The wall papers, the chandeliers, the woodwork, are all worthy of careful study and should be made the basis for suggestions as to substitutes which would be more fitting, less costly, and for the purpose for which they are intended, more effective than the decorations now in vogue.

While furniture is not strictly a part of the housing problem, it is a problem of the home. Many builders attempt to supply tenants with certain kinds of built-in furniture which from the point of view of the migratory tenant is advantageous and

in the supply of this type of furniture there is a very wide educational field that should not be neglected, both as a means of reducing the space ordinarily occupied by movable furniture, and because certain modifications in the present type used would prove aesthetically more effective, and from the point of view of sanitation and cleanliness most desirable. Study of the problem of securing adequate, attractive, cheap, sanitary furniture for the limited space of the workingman's home should be pursued, and the homes considered in the course of the survey would give an excellent basis for such a study.

Surroundings of the Home

Outside the home we find a multitude of powerful factors that affect the sanitation, safety, moral and aesthetic sense of the people. These are not conditions that can be controlled by housing legislation alone, nor are they in many instances problems of legislation. They reflect the pride, the foresight, the self-control of the community. Let us consider some of these factors in order of their importance from the point of view of housing.

Sanitation

- Wind and sunshine
- Cleanliness of streets
- Sources of infection
  - Stagnant pools
  - Open sewers
  - Deposits of waste materials
- Noxious gases
- Unnecessary noises
- Shade trees and other vegetation
- Proximity to parks and play spaces
- Bathing facilities

Safety	Traffic on street Dangerous uses of street and overhanging signs Fire hazards in the neighborhood Lighting of streets
Morality	Amusement centers Unoccupied building accessible Prostitution Liquor traffic Gambling resorts
Aesthetic Elements	Architectural control Street advertising Open spaces Preservation of the picturesque

Having outlined the various factors to be considered in the study of the environment of the home let us consider them somewhat more in detail.

Sanitation.— Outside the home there are certain elements of sanitation that affect the home and may be controlled in various ways.

Wind and Sunshine.—The prevailing winds, which to a certain extent control the temperature of the home, and the relation between the facilities for and the rate of ventilation should be considered in the orientation of the rooms and of the buildings. This, however, cannot be done with entire success without departure from the orientation of the streets unless the street layout has been carried out originally with due regard to the proper utilization of the prevailing winds. What is true of the prevailing winds is also true of the amount of sunshine available in both home and street, and the housing survey should consider the orientation of streets with a view to showing wherein it might be improved in

new areas and possibly suggest methods of controlling distances between buildings, heights, depth of courts, etc., which would give a maximum of circulation of air in summer, a minimum of the cold blast in winter and the maximum amount of sunshine where and when it is most needed.

Cleanliness of Streets.— The cleanliness of the home is partially dependent upon the cleanliness of the street, and the following facts should be ascertained in this connection:

a. What are the main sources of street litter?
b. What city department is responsible for the cleaning of streets and what is the available machinery for such cleaning?
c. What amount of money is at the disposal of the municipality for this purpose?
d. What rules and regulations are imposed upon the people that would tend to keep the streets clean?
e. Are these rules enforced by the department responsible for the cleaning of streets, or is it under some other department?
f. How often are the streets sprinkled, washed, swept, and what are the methods used?
g. Is oil, tar, or other material used to keep dust down, and what effect does it have upon the general cleanliness of the neighborhood and especially the homes?

Sources of Infection.— The sources of infection in the neighborhood are usually made dangerous because of the presence of disease-carrying insects such as mosquitoes and flies. The mosquito breeds in stagnant water and the fly in waste matter, particularly manure. This makes it essential to keep out of the neighborhood these insect-breeding media which are the carriers of disease. The careful

examination of all places which may breed these disease-carrying insects, and the presence of disease in the neighborhood which is directly attributable to infections carried by insects should form an integral part of any complete survey.

Noxious Gases.— The presence in the neighborhood of manufacturing plants, storehouses, and other places which are likely to develop noxious gases should receive the attention of the housing surveyor. While some sanitarians do not believe that gases, when found in reasonably small quantities, are directly injurious to health, it is admitted that they tend to lower vitality and interfere with the ordinary comforts of living and the enjoyment of the home. The loss to property values due to the presence of such gases in the neighborhood is far greater than often would be the cost of the complete removal of the cause of the nuisance.

Unnecessary Noises.— Noises increase with the increase in congestion. The ordinary functions of human life and the satisfaction of the common needs of food, transportation, etc., produce a considerable amount of noise that cannot be avoided, although at times they could be considerably reduced. There are, however, noises such as the ringing of train bells, the blowing of factory whistles[1], the cutting out of mufflers on automobiles, the use of flat wheels on street cars, the use of residential districts for heavy trucking on hard pavements, the escaping of steam and other noises coming from nearby manufacturing plants, and many similar noises which can be eliminated or at least

[1] We do not go to work according to factory bells or whistles, but we still continue this noise-producing practice.

reduced to a minimum. These should be noted as part of the general study of the neighborhood.

Shade Trees and Other Vegetation.—Studies carried on recently in some of the cities of Germany have shown that the amount of shade provided on city streets bears a direct relation to the infant mortality on such streets. During the summer months it is found that where there is ample shade there is a reduction in the infant death rate. The housing survey should include a study of the character, number, condition, and care of trees, shrubbery, and other vegetation on the street.

Parks and Play Spaces.— Proximity of parks and play spaces is recognized as an advantage to a neighborhood, both from the point of view of sanitation, since they afford breathing spaces, and because play is essential to the health of both children and adults. The proportion of persons to a given area of park, and the number of persons, particularly children, to a given area of play space, should be considered, and if possible comparison between specific districts and similar districts in other cities should be made.

Bathing Facilities.— As it is frequently found that less than one per cent of the homes in the districts occupied by wage-earners have bathing facilities the housing survey should ascertain what facilities are available for bathing outside of the home. The presence in the neighborhood of a public bath, a swimming pool, a lake, or some other body of water that could be used for bathing purposes, and what facilities for such use are available or should be provided, come within the scope of the housing survey.

Safety.— The surroundings of the home may present such conditions of danger to the life and limb

of both children and adults as to require a complete rearrangement of traffic. Many changes in the character and use of structures in the proximity of residential areas can be brought about without great effort or cost if the dangers are pointed out and the changes needed are indicated.

Traffic on Streets.— It is a well-known fact that great volumes of traffic flowing through certain streets separate neighborhoods, because of the dangers of crossing and expose pedestrians, particularly children, to dangers that could not be avoided even with the greatest vigilance. The following should be studied in this connection:

a. What is the volume of traffic per hour and when is it at its maximum?
b. What is the character of the traffic — street cars, trucks, horse vehicles — and what is the usual speed of this traffic?
c. Are the street crossings well marked and are they protected by traffic rules?
d. Are public buildings such as schools, recreation centers, churches, etc., located so that there is much need of crossing the main thoroughfares?
e. Is the traffic in any way classified and segregated so as to take most of it out of the residential streets?

That other questions of traffic may arise in the course of the inquiry is certain, but the above will focus attention at least upon the most important conditions to be noted.

Dangerous Use of Streets and Overhanging Signs.— Anyone familiar with the conditions of streets in congested districts will realize that the "wire entanglements" strung by the telegraph

telephone, and electric light companies are a great menace to the safety of the people. There are also cases of use of streets for storage of merchandise or waste materials, boxes, etc., which are a menace to pedestrian traffic. Open doors of basements and cellars without protection, chutes, etc., are all worthy of consideration from the point of view of safety of the streets, but one of the most serious menaces and one of the least under control is the overhanging sign which in case of storm or because of ordinary deterioration may become a source of serious danger. The extent to which this evil is present in the street should be noted.

Fire Hazard.— Many of the fires in residential districts are frequently traceable to business buildings which are used for the storage of combustible materials, or where combustible materials have accumulated in the course of time and which ignite by spontaneous combustion or in some other manner. These buildings are frequently without night watchmen and the fire has a chance to get beyond control and affect the neighborhood.

While it is not possible to make a thorough investigation of the dangers from fire due to the presence of manufacturing plants in the neighborhood, data relative to previous fires of similar origin may assist in promoting better control and may also lead to the establishment of zones.

Street Lighting.— The street lighting should be considered from the point of view of its adequacy in so far as distance between lights, their lighting power, their location in relation to trees or other obstructions which would interfere with the full service of such lights, and the care that they receive from the authorities in charge relative to having

timely repairs, and regularity of lighting in relation to the seasons of the year and the conditions of the weather.

Morality.— The protection of the morals in the home may be adequately provided for and yet the conditions of the surrounding territory may expose the residents and their children to the most serious evils.

Amusement and Recreation Centers.— In order to care for the leisure time of the people certain amusement and recreation centers are necessary and many communities in recent years have made an effort to provide such facilities. There also has been throughout modern civilization a development of commercial amusement and recreation centers which so far have successfully competed with the non-commercial facilities. A survey should ascertain the character and adequacy of such facilities by securing answers to at least the following questions:

a. What are the amusement and recreational facilities in the neighborhood — commercial, philanthropic, municipal?
b. Are the various centers located advantageously from the point of view of access and what are the possibilities for successful competition between the desirable and undesirable centers?
c. Are the non-commercial centers adequately equipped and are they of sufficient size to meet the needs of the people?
d. What are the facilities that could still be developed to the advantage of the neighborhood and its people?

Unoccupied Buildings Accessible.— Unoccupied buildings which are accessible to children or adults are a serious moral menace to the neighborhood.

Their number, character, use, and possibilities for removal should be considered in the survey.

Prostitution, Liquor Traffic, and Gambling.—In the poorer sections of many cities prostitution, the liquor traffic, and gambling are often found separately or in league with each other. To what extent these evils are present in a residential district can often be ascertained by a careful investigator, and improvements may result.

Esthetic Elements.—It is difficult to deal with the esthetic elements of the surroundings of homes without encroaching upon city planning. It is nevertheless important to consider this element as upon it depends the general aspect of the neighborhood, the character of the population that may settle in such a district, and the general attractiveness of the city as a residential center. A city may be interesting because of its monuments, but its general attractiveness depends upon the character of its homes and the protection that these homes are receiving against the usual misuse and abuse of the aesthetic resources and possibilities of the community. With the development of the garden-city idea and the widespread interest in city planning the esthetic surroundings of the home will not be considered in the future as less essential than the provisions for safety.

Architectural Control.— Within recent years art commissions and city-planning commissions have exercised a certain amount of control over public buildings. The control of the height of buildings in cities is tending to establish uniform standards and zones which will do away with the lack of uniformity in height as well as the use of certain materials out of harmony with local needs and local condi-

tions. Public squares are frequently protected by special laws against structures that are architecturally objectionable. A step in the direction of controlling more specifically the architecture of individual homes is bound to be taken by many cities if the present promising tendencies secure the hold on the community they are capable of securing.

The survey, while it may not venture too far afield in criticizing certain types of architectural design, if indeed there be any design, can secure the necessary data relative to the cost of structures which conform to the essentials of design without interfering with utility, and can show in what ways various types could be utilized in the construction of cheap and comfortable as well as architecturally attractive homes or buildings located in residential neighborhoods.

Street Advertising.— Street advertising has reached such dimensions in this country that a movement for the protection of the people against it is necessary at this time. Again and again we find buildings bearing glaring commercial advertisements that are unattractive or even repulsive. In some instances such advertisements reach enormous proportions and are erected in front of windows where, aside from presenting an unsightly appearance, they obstruct light and interfere with ventilation. While the writer recognizes that advertising may be decorative, educational, and promotive of economy for the consumer, much of our advertising is unsightly, untruthful, misleading, and vulgar. To what extent advertising encroaches upon the possible attractiveness of the neighborhood may easily be ascertained in the course of a survey by a general study of the advertising space, its

character, its relation to the people in the neighborhood and its quality from the point of view of design and color.

Open Spaces.—In most neighborhoods there is a certain amount of open space which may or may not be public property. The condition of such space and the use made of it should be recorded. Some of the building areas utilized neither for public nor private purpose present not only a sanitary menace, but a type of unsightliness that may become a detriment to property values and the general appearance of the neighborhood. The size, use, and appearance of open spaces should be recorded with such suggestions for use as the neighborhood may seem to need at the time of investigation.

Preservation of the Picturesque.— Grades, rock formations, vegetation, bodies of water of various sizes and kinds may be used as features which would add to the picturesque character of a neighborhood. Whether these assets are actually used is a matter that may be determined in connection with a housing investigation. The misuse of a water front, the pollution of a stream, the failure to recognize the picturesque values of certain grades are all common conditions in American communities, and the survey should call attention to them with a view to showing the extent of the losses to the community through the failure to utilize these assets and to suggest possible uses that would be to the advantage of the neighborhood and the community as a whole.

The above discussion relates exclusively to the existing housing conditions in a given community and the various aspects of the problem that may

properly be included in the study of the facts. They are perhaps more inclusive than is ordinarily considered in a housing survey, but they are nevertheless the basic facts upon which a constructive housing program of far-reaching effect must be founded.

Relation of the Home to the Community

We have so far considered the relation of the home to the individual and its efficacy in furnishing the essentials of privacy, sanitation, comfort, and attractiveness. We shall now discuss the relation of the home to the community, particularly from the point of view of accessibility to place of employment, centers of education, recreation, and food supply.

A classification of the various factors of community life to which the home bears or should bear an intimate relation might be as follows:

Place of employment
Leisure-time facilities
Food supply and other essentials

Considering each one in turn we find that these facilities and their accessibility to the home determine not alone rents, but also the distribution of the population and to a limited extent the type of dwelling from the point of view of number of families per dwelling and the height of the structures.

Place of Employment.— The distance from the home to the place of employment relates to cost of transportation (car fares), time consumed in travel, the discomfort attendant upon travel in cars or

trains in so far as their regularity, speed, frequency, and distance from home, etc., are concerned.

The following inquiries will throw some light upon the relation between the home and the place of employment:

a. What is the cost of transportation to and from work of each working member of the family?
b. What is the distance that must be traveled from the home and the place of employment to the point where public conveyance is entered?
c. How long a time does the travel consume and how regular, speedy, and frequent are the schedules of the transit facilities used?
d. What proportion of each person's time is used in travel and what are the working hours?
e. What is the total cost of transportation for the entire family per week as compared with the total rent paid?

Information covering the above questions would be helpful in determining the reasons for congestion as well as to indicate in what manner the present distribution of traffic and the distribution of the centers of employment might be subject to some adjustment. Street-car and railroad fares, time schedules, etc., could easily be adjusted to meet local needs, thereby making travel less time-consuming, less expensive, and conducive to a more reasonable distribution of the population in relation to centers of employment, amusement, food supply, etc.

Leisure-Time Facilities.— It is not possible within the scope of this book to enter into a detailed discussion of the various facilities for leisure time that a community might or should provide. For such a discussion I might refer the reader to my article on " Organized Leisure as a Factor in Con-

servation" published in the *American Journal of Sociology* for November, 1918. All we can hope to do here is to point out the following fundamentals that should be ascertained relative to the relation between the home and leisure-time facilities.

Access.— Recent years have witnessed a recognition of the need for open spaces, playgrounds, moving picture theaters, etc., in every community of any size. In large centers almost every home is within easy reach of these facilities, but in many communities special opportunities for education and culture are available only in the more congested areas and it is to this point that all who desire to take advantage of these facilities must travel. It is of the utmost importance, therefore, to ascertain in the course of the survey what the immediate facilities are, and what use such facilities for leisure-time are really receiving, and to point out to what extent they can be distributed so as to be within easy reach of the largest number of homes.

Fitness.— Many of the facilities provided are not desired by the people, or at least are so far from their immediate needs or their usual taste as to be out of harmony with the local requirements.

Just how this information should be obtained must depend upon the experience, tact, and general understanding of people and nationalities that the investigator may have. A survey of the recreational facilities of the community, if available, should be the basis for such a study. That the absence of proper and adequate leisure-time facilities is in the way of a more adequate distribution of population, quite as much as a poor transit system is in the way of a better distribution of

homes, is recognized by all those familiar with conditions, especially in large cities.

Food Supply and Other Necessities.— It is a well-known fact that where congestion is greatest the food supply is likely to be ample, varied, and cheap. Public markets and the general competition between dealers, as well as the large quantities of food that can be dispensed in a short time without danger of waste, form an important factor in keeping down prices in congested centers. This condition may be considered as one element that makes high rents possible in congested areas without tending to encourage wage-earners' families to move into more isolated neighborhoods, where the cost of living is higher, unless travel to public markets or to the center of the market district is possible.

A survey should consider differences in market prices of food and other commodities in the districts studied and the standard prices of the public markets and the main food dispensing centers. Considerable light might be shed upon the subject of distribution of markets in the community, and a better understanding of the causes of congestion, at least from the point of view of the cost of living, may be obtained.

Cost of the Home

In the foregoing pages of this chapter we have dealt with the relation between the individual and the home, and the relation between the home and the community. We shall now deal with the relation between the cost of the home and the family income, and we shall consider cost both from the

point of view of purchase price and from the point of view of rental rates.

The study of the conditions relative to the cost of homes may be divided into the following aspects:

Purchase cost and security of investment
Maintenance cost (taxation and special assessment)
Financial resources and cost of capital

While the above are simple factors that anyone familiar with the problems of ownership will recognize and consider, some detailed discussion as to methods of approach may not be out of order.

Purchase Cost.— The original investment in the home is perhaps the most important and most difficult step in the process of obtaining and maintaining a home. Some of the questions that the survey should be able to answer in this connection are as follows:

a. What is the average original cost of the various types of homes on the basis of number of rooms and in relation to districts?
b. Is the price of a home affected by shortage of homes, shortage of building areas, or an unusual demand due to influx of population, or abnormal congestion?
c. Is the transfer of property by sale and purchase frequent in proportion to the population, and what types of homes sell most easily and at the best prices?
d. Is the control of home building and trade in the hands of a limited number of real-estate dealers, or is the trade well distributed with a reasonable amount of competition?
e. Are the houses for sale in the market of the type that wage-earners could purchase and use, or are they of the type that is unsuited for persons with moderate incomes?

f. What is the proportion of home ownership in the community as compared with the proportion of ownership in specific districts considered in the survey?
g. What is the proportion of single, two-family, and multiple dwellings in which the owners occupy the whole or a portion of the dwelling?
h. What have been the causes of the reduction in the selling value of properties in specific districts — immigrant settlements, establishment of industries injurious to property values, removal from the community of vital industries which furnished employment for large numbers of workers, the opening up of new residential areas, the removal of workers to other communities affording better opportunities for employment and higher wages, etc.?

Maintenance Cost.—As soon as the purchase of the homes has been consummated the cost of maintenance must be met. The following inquiries relative to the maintenance cost are essential:

a. What is the tax rate on real estate and on what basis is the assessment fixed?
b. Are any exemptions from taxation made upon homes and what is the basis for such exemptions?
c. Are homes which have been mortgaged taxed on their full assessed valuation, besides the tax on the mortgage itself which is paid by the mortgagee?
d. What has been the total cost to the owner for special assessments over a period of from five to ten years, and are these assessments paid in full or in small payments at given periods of the year? What is the relation between these assessments and the value of the property?

e. What service does the city provide by way of removal of waste garbage, ashes, etc.?
f. What improvements, which were required by law, have been made by the owner during the last five years, and what has been their total cost?

Financial Resources and the Cost of Capital.—The fluidity of capital for housing purposes and the cost of such capital in terms of interest should be considered as a part of the conditions which assist or interfere with the ability to secure the ownership of a home. The following may be the line of inquiry followed in this connection:

a. What is the proportion of homes owned outright by the people living in the district studied as compared with the total ownership in the community?
b. What institutions, business, philanthropic, or municipal, afford loans to wage-earners for the purchase of homes?
c. Are there any cooperative organizations, such as building and loan associations, which afford opportunities for saving funds to be used in the purchase or building of homes?
d. What is the difference between the cost of homes to ultimate purchaser and the actual cost of land and construction to the speculative or professional builder?
e. What are the usual conditions imposed upon property prior to the granting of loans by the various agencies in a position to loan money?
f. What is the usual rate of interest and is it fixed by law?
g. To what extent are homes purchased by loans from various sources retained by the owners, and what are the usual causes of sale of such properties by owners?

h. Are foreclosures of mortgages frequent and under what conditions do these foreclosures usually take place?

Rents.— Since from 75 to 85 per cent of the people in most urban communities live in rented homes, the question of rate of rent is even more important than the cost of the home. The following may give some indication of the rental rates in relation to the needs and incomes of the people:

a. What is the average rent in apartment or dwelling according to number of rooms?
b. What is the difference between these rental rates in single, two-family, and multiple dwellings?
c. What proportion of the income of the main breadwinner is spent on rent?
d. Is there any relation between the number of persons in the family and the proportion of rent out of the income of the main breadwinner?
e. The proportion of rent out of the total income of the family according to the number of rooms should be ascertained.
f. What proportion of rent is paid out of rentals paid by roomers?
g. Are small or large families, and in what proportion, keeping lodgers in order to piece out rents?
h. What is the relation between rents in congested districts and in more sparsely settled districts, and how are these rents affected by the number of rooms per person?
i. What is the total loss per year due to unoccupancy of homes in various districts, and is there any relation between unoccupancy in the district and rental rates?
j. What type of homes are more frequently unoccupied — consider size, number of apartments per dwelling, sanitary condition, number of stories, etc.?

In stating the various questions that should be made the subject of inquiry in a housing survey, it should be recognized that each community has its own peculiarities which will appear as the survey progresses. It should not be assumed, however, that many of the questions raised in this chapter could be eliminated from any survey of housing conditions which is to eventuate in a constructive program of reform.

Community Reconstruction and the Survey

Upon the ruins of war a new civilization must be built. Where monumental structures used to throw their shadows over congestion and squalor, new communities will rise. Upon the ashes, caused by the torch of the German warrior, a newer conception of community life will be created, in which the sunshine, the air, the open country, the intimate and creative community life will be returned to the people. How to remove the bloodstained *débris* and open the avenues towards the achievement of this task is a problem that is now before the world, that demands all the devotion, the ingenuity, the skill and the imagination of the engineering, architectural, city planning, and sociological leaders of the world.

But outside the deliberate and cruel destruction of war, floods, earthquakes, cyclones, conflagrations, and even volcanic eruptions have during the last score of years presented problems of community reconstruction similar to those created by war. The solution of these problems of reconstruction is or should be as consistent with the recent advances in the science and arts of community building as we are hoping to find applied to the reconstruction of

French and Belgian cities when the task is completed.

That reconstruction work requires a survey prior to the formulating of any plan of action is obvious. What form such a survey should take would be difficult to state in full within a limited space. There are, however, certain elements which can be presented in outline so as to indicate the trend rather than the content of the investigation to be undertaken. These elements may be stated as follows:

Retrospect
- History of the development of the city
- Esthetic and spiritual values of the country
- Potent factors in the development of community — people, occupation, etc.

Territorial factors
- Topography, geology, orography, hydrography, climatology, etc.

Destiny
- Type of community, industrial, commercial, residential, etc.
- Independent or satellite community

The time element

Values and cost

It has been reported that one of the great fears of the allied nations, particularly France and Belgium, is that the Americans may undertake to plan the reconstruction of their destroyed cities. Whether the fear is justified or not remains to be proven. That America has a contribution to make is not to be doubted; whether this contribution will be made in the field in which America holds the highest rank remains to be seen.

Retrospect.— Every community has its historic background which relates not only to its geographic

location but is intimately associated with a whole series of social, political, and economic phenomena that have contributed towards the development of the community both as to character and size. To what extent the geographic location has determined the history, or history has taken advantage of geographic conditions may not always be possible of determination. It is certain, however, that the complexion of community organization and community functioning is intimately related to the geographic factor. The orientation of the streets, the architecture, the avenues of transit, the location of public buildings, the trades and industries of a community have their foundations, or should have their foundations, in the geographic factors. In what ways this relationship has been utilized to the advantage of the community must be made clear by a careful study of the history of each community and suggestions for changes must be consistent with both history and geography.

Housing and city planning in order to be radically effective must base their work upon scientific data, while the influences of tradition and customs must not be overlooked. They represent not only the accumulated experience and established standards, but a more important spiritual value which is associated with one's home community. The comparatively insignificant practices of the people, such as the use of street frontage for planting, the habit of conducting restaurants on the sidewalks (as in Paris) are an integral part of the atmosphere of the home town which should be respected and considered with the greatest of care before a decision as to the necessary abandonment is reached.

Certain esthetic and emotional elements which from the practical point of view may seem inconsistent with the best interests of the people, economically at least, must remain sacred as long as their presence does not constitute a real menace to the efficiency and safety of the people. Narrow streets, poorly located monuments, public buildings no longer of use for the purpose for which they were intended should be removed or destroyed only when some other method of meeting the same need cannot be found. This work necessitates not only a study of the conditions themselves, but thorough familiarity with local conditions as they relate to these, a thorough understanding of the traditions that these conditions have established and the value esthetic and spiritual that people place upon them. The antiquarian knowledge necessary for this kind of work may not always be found in the person skilled in the method of the survey, but that knowledge can always be secured from the archives of the community and the opinions of the people as a whole.

The development in a community of a particular type of industry or commerce, the accidental settlement of a class of artisans skilled in a specialized trade, the presence in the community of certain educational or cultural institutions, etc., and the relation of the past growth and character of the locality must be studied in the course of the survey in order to ascertain to what extent particular needs of the people may be met on the broad basis of city-planning and housing policies. This must be based upon general knowledge and the community scheme of housing must comply with the specific conditions

which although accidental become part of the very life of the people, both socially and economically.

Territorial Factors.— The sum total of natural environmental conditions may be designated as embracing the territorial influence in shaping the community. We have referred above to the geographic factor as a historic background. As we advance in the understanding of social and economic values of territorial conditions we shape the plans, at least in so far as the homes in their relation to the community are concerned, so as to utilize all territorial advantages, topographic, geologic, orographic, hydrographic and climatographic, etc., and to overcome difficulties presented by these factors at the lowest possible cost and without interfering with their aesthetic values.

Many city plans have failed because they have been based upon too limited inquiry into the territorial conditions and their relations to the life of the people as a whole.

Destiny.— While the future of a city or a town is largely predestined by location, character of people, social organization, the political state, etc., we are coming more and more to recognize a certain value in the type of social engineering which by mustering the primary elements of community life may so shape its plan as to emphasize or develop certain functions of industry and commerce in preference to other functions less suited for local needs. Types of industry and commerce unsuited to local needs are likely to develop to the disadvantage of the community unless their development is controlled by effective city planning. This type of directive influence of the city plan has so far re-

ceived comparatively little attention but is capable of advance under proper conditions. The basis of this development must be found in a thorough knowledge of the facts as revealed by the survey.

This line of inquiry may at first seem quite removed from the housing survey, but in reconstruction work the rebuilding of homes must bear a close relation to the activities of the people in these homes, both as members of the community and as part of an industrial and social system.

The Time Element.— In all reconstruction work, the time that must be devoted to the task is an essential consideration. Frequently the chances for adequate reconstruction depend upon the intelligent selection of such parts of the task as must be met immediately from those that can and should be postponed until a later date. The use of existing facilities, the erection of temporary structures, the need for reestablishing the most essential business activities, the problem of securing sufficient labor and materials, the minimum provisions for the protection of health and safety, are all intimately related to the amount of time that can be devoted to temporary construction and the point at which permanent planning and construction should begin. Another aspect of the problem of time is to be found in the selection of improvements in the order of their importance as essentials of community life. Much difference of opinion will be found when this is considered, but the survey should endeavor to keep the interest of the largest number of people always in mind and should keep alive the interest in future improvements as much as possible. Careful study of the habits of the people and their immediate needs

as expressed by them and understood by the survey should be the basis in determining all matter of time relative to various features of reconstruction.

Values and Cost.— No plan of reconstruction can be carried out without thorough knowledge of values as they existed prior to a calamity, during a calamity, and the potential values that can be secured by reconstruction either on the old plan or along new lines. It is true that future values can only be estimated on a reasonably wide margin of error, but the more accurate the knowledge of past and existing values, the more accurate the forecast as to future values will be. It must be remembered, however, that values existing before a catastrophe may be wholly out of keeping with the city values of land and buildings, dut not so much to city planning as to poor and insufficient use. A survey of the distribution of such values and possibilities for restoring to the individual and final owners all the values both without unnecessary or unusual expense, should form the basis of such an inquiry. When improvements of property would actually enhance values, care should be taken so to control the enhancement of such values as to make speculation impossible and distribution of benefits as equitable from the point of view of the whole community as they can be made.

The Housing Survey and the New Community

Many new communities have sprung into being in this country during the last two decades. Some of these are independent, residential, or industrial centers while others are satellite communities developed as an outlet of larger centers either for the purpose of relieving congestion or because con-

ditions of living, industrial development, transportation, etc., have forced expansion into adjoining and undeveloped territory.

It will be found that the conditions which relate to reconstruction relate perhaps more positively to the development of new communities. The difference, however, between a new community and one under reconstruction is that in the former case more imagination and foresight needs to be exercised in determining the human factors and their character than is necessary in the case of the latter where the people have long been established, and their character, customs, and needs are well known.

The use that is intended for the new community, the use of the territory to be developed, the type of business and industry for which provisions must be made, the flexibility of the land values, the relation to the centers of population to which the new community is to have social, economical, or political relations, the rate of growth contemplated, etc., need special study. The people, however, as the most essential part of the community, should be known or determined upon as far as possible. Nationality, race, average size of family, length of stay in the United States (where foreigners are to be housed), customary use of rooms, particularly kitchen and sitting-room, probable wages and family incomes, occupation, etc.—in a word, every possible factor affecting the planning of homes so that they be used to their fullest possible extent and to the best advantage of the tenants. That these facts are not always obtainable is conceded, but some general conception of them can be formulated, particularly in the case of industrial villages where the industry is well known and the choice and control

of workers is largely determined by the industry and the employers.

City planners with a social vision are helping to realize the importance of determining upon the human elements in new communities and are taking strict account of them in their work. The whole city plan depends upon its relation to the home, and the housing survey will always remain the foundation of efficient city planning.

CHAPTER VI

GARDEN CITIES

AS FAR back as history has been able to trace the slender threads of the origin and growth of civilization one finds chronicled efforts towards the establishment of ideal communities. Dreams of a new order in which crime and poverty, squalor and disease and death would be checked have inspired thinkers from Aristotle to Wells.

That these ideals were not realized in the most advanced of the ancient cities may have been due to the fundamental philosophy of the state which recognized war and worship as above life and labor.

The concept of the individual home was subservient to what might be described as a kind of military and religious communism. Demosthenes in his third *Olynthiac* tells us that "The great men of old built splendid edifices for the use of the state and set up whole works of art which later ages can never match. But in private life they were severe and simple and the dwelling of an Aristides or a Miltiades was no more sumptuous that that of any ordinary Athenean citizen." Samuel Dill in his *Roman Society from Nero to Marcus Aurelius tells* us that during the age of the Antonines in 180 A. D. "Men looked for their happiness to their city rather than to the family or the state."

As we search the records of ancient city planning and city building we find little relation between the ideal state and the protection of the lives of the people in terms of housing. Venkatarama Ayyar,

however, tells us that in ancient India "City building was not made piece by piece and section by section, but as a whole, having regard to the rise of the town, the prevention of overcrowding, and the provisions of open spaces. . . . ."[1]

It was not until Sir Thomas More wrote his *Utopia* (1615-16) that community building as an ideal which recognized life, labor, and leisure above war and worship as underlying principles of city and town planning found expression.

Perhaps a brief quotation from the *Utopia* will give some conception of the vision displayed by Sir Thomas More which so clearly forecasts the modern garden city: "The streets are very convenient for all carriage and are well sheltered from the winds. Their buildings are good, and are so uniform, that one side of the street looks like one home. The streets are twenty feet broad; there lie gardens behind all their houses; these are large but enclosed with buildings that on all hands face the streets; so that every house has both a door to the street and a back door to the garden. . . . . They cultivate the gardens with great care, so that they have both vines, fruits, herbs, and flowers in them. . . . ." Further on the gardens in *Utopia* are described: "so that he who founded the town, seems to have taken care of nothing more than of their gardens."[2]

Francis Bacon's *New Atlantis,* in which the ideal community is based upon a full development of knowledge, did not see the light until 1629. Bacon

[1] Venkatarama Ayyar, *Town Planning in Ancient Dekkan.* Law Printing House, Madras.

[2] *Ideal Commonwealths,* pp. 93-94. (Utopia), George Routledge & Sons, Ltd., London.

made no contribution towards the art or science of community planning, but his contemporary, Tommaso Campanella,[1] a Dominican monk, while in an inquisitional prison for twenty-seven years wrote *The City of the Sun,* a poetical dialogue in which he forecast Ebenezer Howard's idea of the circular city in the following words: "The greater part of the city is built upon a high hill, which rises from an extensive plain, but several of its circles extend for some distance beyond the base of the hill, which is of such rise that the diameter of the city is upward of two miles, so that its circumference becomes about seven. . . . . It is divided (the city) into seven rings of huge circles named from the seven planets and the way from one to the other of these is by four streets and through four gates that look towards the four points of the compass."[2]

James Harrington (1611-77) published in 1656 his *Oceana* depicting an ideal communistic state which was dedicated to the "practical" Cromwell who did not want to be "scribbled" out of what he won with the sword. Hume on the other hand praised Harrington's *Oceana* as the most practical ideal that had been offered to the public.

During the fifteenth and sixteenth centuries many religious groups created communities on a communistic basis, the purpose of which was very largely the practical application of religious beliefs and ethical ideals through the development of standards of community planning and community building.

Claude Henri Saint-Simon (1760-1825) and his follower Charles Fourier (1772-1837) are the out-

[1] Born in 1568, died 1639.

[2] *Ideal Commonwealths,* pp. 217-18, Lamb Publishing Co.

standing figures of the eighteenth and early nineteenth centuries in the history of Utopian community planning. Fourier is especially conspicuous because of his proposals for the development of communistic houses which are not so Utopian when considered in the light of our modern apartment house life.

Living in an era when factory life was beginning to destroy the family life of the industrial workers, and when crowding into the city assumed most threatening proportions, Robert Owen in 1818 proposed the construction of a model community which was started in 1820 at Orbiston, near Motherwell and which came to a disastrous end in 1828. The funds for the establishment of this model community were mainly supplied by a follower of Robert Owen, named Abram Combe, a wealthy tanner.[1]

Owen's plan was based upon a pamphlet by the Quaker, John Bellairs, published in 1696 and entitled: "Proposal for raising a college of industry for all useful trades and husbandry, with profit for the rich, and plentiful living for the poor, and a good education for youth, which will be an advantage to the government, to the increase of the people and their riches." In 1841 the building of another community was undertaken under the inspiration of Robert Owen. The founding of this enterprise was materially assisted by socialists from all over England but the project came to an end in 1846. This community was named "Harmony" by Owen and was located at Queenswood.

[1] There seems to be a difference of opinion between Mr. Henry Vivian and C. B. Purdom as to the date of the construction of Orbiston. The former sets the date as March 18, 1826, while the latter gives the date as 1820.

Following Owen's leadership many attempts at ideal community building came into being. In 1845 a London architect named Moffatt proposed the building outside of the metropolitan city of a community that would relieve the congestion of London and accommodate about 359,000 people. Three years later a further attempt to develop a residential village was made. This was to be located near Ilford Station in Essex. Tait's *Edinburgh Magazine* (December 1848) describes the object of the project as follows: "Air and space, wood and water, schools and churches, shrubberies and gardens, around pretty self-contained cottages, in a group neither too large to deprive it of a community character, nor too small to diminish the probabilities of social intercourse."

In 1849 James Silk Buckingham published a book entitled *Natural Evils and Practical Remedies.* The scheme was to be carried out by a model-town association with the following aims: "There was to be no overcrowding; medical service, nurses for children, and education were to be free; there were to be public baths, public kitchens, and laundries. There were to be no intoxicants, weapons of war, nor tobacco."

"The manufactories were to be established nearest the outer edge of the town so as to place the laboring portion of the population in the full enjoyment of the open air."[1]

There is such close similarity between the project of Buckingham and Mr. Howard's *Garden Cities of*

[1] C. B. Purdom, *The Garden City: A Study in the Development of a Modern Town,* p. 11, E. P. Dutton & Company, New York, 1913.

Tomorrow that when the latter became familiar with *Natural Evils and Practical Remedies* he felt called upon to explain that he had not seen Buckingham's book until "I had got far on with my project."

That early in the history of the garden-city movement it was realized that there was a close relationship between the character of the community and health is evident from the study of the literature on this subject. Benjamin Ward Richardson was the first, however, to focus his proposal for a model community upon health. In an address delivered before the Health Department of the Social-Science Congress at Brighton in October of 1875, he set forth the principles upon which his ideally healthy community "Hygeia" should be established. In stating his aims he said: "It is my object to put forward a theoretical outline of a community so circumstanced and so maintained by the exercise of its free will, guarded by scientific knowledge, that in it the perfection of sanitary results will be approached, if not actually realized, in the coexistence of the lowest possible general mortality with the highest possible individual longevity."

The first successful English garden city, however, was not built until 1887 when Sir Wm. H. Lever purchased 56 acres of land upon which he undertook the building of Port Sunlight, a model village which is still one of the striking examples of successful planning for residential as well as industrial life. A similar enterprise followed in 1889 when Mr. George Cadbury removed his cocoa works from Birmingham to Bournville, a garden village covering an area of 612 acres, about one-fourth of which has already been built up with attractive resi-

dences and public buildings. Both of these garden villages were modelled more or less upon the plan of "Saltaire" built in 1853 by Sir Titus Salt of Bradford.

The dawn of a new era in community building, and particularly in the practical development of the garden city, came with the publication of *Tomorrow: A Peaceful Path to Real Reform* by Ebenezer Howard in 1898. This book was reissued in a third edition in 1902 under the title *Garden Cities of Tomorrow.*

The garden city as projected by Mr. Howard contemplated the following results:

1. Stemming of the tide of the rural exodus and the creation of movement of the population countryward.
2. The revival of the small eighteenth-century town into a new creation full of romance of modern progress in the art of living.
3. To establish the principle of business administration in the management of an ideal community.
4. The elimination of parasitic enterprise from the business of home and community building.
5. To make cooperative enterprise the controlling factor in the business success of ideal home and community building.
6. To develop a scheme of community planning that will do away with the evils of intensive urbanization as found in the great metropolitan centers of population.

In order to attain these ends Mr. Howard imposes upon the garden city the following conditions:

1. The garden city must be built from the ground up, unhampered by previous plans or structures.

2. The size of the town should be limited and the unit capable of being repeated on the same plan.
3. Dividends on capital invested should be limited and the expenses of the town should be met only from revenue derived from rents.
4. Homes for all classes of people should be provided.
5. Factories should be located in the same relation to health as the homes.
6. A belt of agricultural lands should be reserved in the outlying districts of the town.
7. Provision against overcrowding should be made.

After many conferences and much propaganda under the leadership of such men as Raymond Unwin, the town planner, Thomas Adams, and Mr. Howard, the development of "Letchworth" was started in the summer of 1904. The principles upon which this enterprise was launched are best stated in a memorandum issued by the Garden City Company which reads in part as follows:

Under these circumstances it is obvious that for the sake of the tenants themselves, as well as in order to secure the fulfilment of the objects of the company, it is desirable to apply the most equitable conditions of land tenure possible both in respect of public and private interest. This can only be accomplished if the company in the first place maintains the full control of the development of the town, and in the second place adopts the system of tenure which will secure, as far as possible, under the established laws and customs of the country, that the increase in the value of the land shall benefit those who create it. As the greater part of this increased value is due to the social activities of the people as a whole (i. e., in their collective capacity) it is in this capacity that they should receive the benefit, and not as private individuals.

The successful planning and building of Letchworth, the first modern garden city as a cooperative enterprise, gave new impetus to the garden-city movement both in England and on the continent. Mr. Ewart G. Culpin tells the story of the growth of the garden-city movement in England in his *The Garden-City Movement Up to Date,*[1] and we can do no better than to refer the reader to this excellent work for further details. Suffice it to say that in its brief existence of ten years from 1903 to 1912 the Copartnership Tenants Limited increased its assets from approximately $250,000 to $30,000,000. What has been done in France, Germany, Italy, and Belgium along the lines of promoting the garden-city idea cannot be stated in the limited space of this book. The achievement of England stands out as a stimulating lesson to the whole world.

In the discussion of the garden cities as a type of community, one encounters considerable confusion between the *Garden City,* the *Garden Village,* and the *Garden Suburb.* In order to differentiate closely between these various types of garden communities some definition may be necessary.

The Garden City is a self-contained, independent community in which the residential, industrial, and recreational provisions are arranged according to the garden-city principles of Ebenezer Howard and his followers. It is a satellite of no particular city nor of any specific industrial plant. So far we cannot point to a single such city as an accomplished fact.

[1] Ewart G. Culpin, *The Garden-City Movement Up to Date.* The Garden City and Town Planning Association, 1913.

The Garden Village is a community which is residential in character, and which has been created to accommodate the employees of a particular industry located within or in the vicinity of its plant. Port Sunlight is the best illustration in England of this type of garden community. Gary and Pullman are perhaps the most familiar illustrations in America, although they fall short of the ideal garden community in both planning and methods of home ownership and control.

The Garden Suburb is a satellite community developed on ideal lines of town planning and designed mainly for residential purposes and within easy reach of a large populational center. Bournville, located five miles from Birmingham and recently included within its corporate limits was built by Mr. George Cadbury and is the best illustration of an English garden suburb.

With the advance of the movement the differentiations between these various types of garden communities is bound to become more perceptible, but the generic name of "garden city" will perhaps always remain the most attractive, and most descriptive of its main features.

In the foregoing discussion we have endeavored to trace briefly the evolution of the garden-city idea. We shall now endeavor to point out some of the conditions which have led in more recent times to the application of this idea to the practical problems of community development and community building.

Beginning with the most glorious days of Athens and ending with sixteenth-century Paris we find a centrifugal industrial movement which forced many shops into the outlying districts of the city. The

suburbs or faubourgs of Paris are ample evidence of this trend. Eventually the city limits extend to and finally engulf the suburban community like a giant many-tentacled hydra. Soon all boundaries between the two communities are wiped out and a new exodus takes place which creates new suburbs.

High cost of land, and difficulty of industrial expansion, congestion of traffic, high taxes, a poor and inadequate labor supply are responsible for this industrial exodus. The garden-city movement merely crystallizes an economic need and by the use of modern methods of town planning as well as cooperative financing, profit sharing, and administration promises to rid the new communities of the evils and dangers of the constantly threatening city life.

The promise of the garden-city movement for the future can hardly be estimated at this early stage of its development. That under the most favorable conditions it may develop a communal spirit which would create the most far-reaching means of community cooperation can hardly be doubted. Be the outlook for the future what it may, the garden city has already taught us lessons in community planning and community financing that are bound to revolutionize and intensify our community life by recognizing our needs for life, labor, and leisure, and in meeting them.

In the United States, where many cooperative, communistic and socialistic experiments in community life had their birth in the early part of the last century, we can find not a single garden city which has carried out the principles laid down by

Ebenezer Howard as applied by the copartnership movement of England.[1]

Building upon the dream of Morris' *News from Nowhere*, the future will witness a return to the open country, but instead of "the man with the hoe" we shall meet the industrial worker who has passed through and absorbed the advantages of intensive communal life and who faces the future as an active, participating, intelligent member of a new social order. The garden city leads the way to the new order.

[1] Dr. John Nolen in his pamphlet entitled *A Good Home for Every Wage-Earner*, has given a very full list of the larger housing schemes in America. This, however, should not be taken as a list of garden cities in the United States.

CHAPTER VII

THE GARDEN-CITY IDEA IN URBAN DEVELOPMENT

THE failure to regulate heights of buildings, the absence of municipal zoning of our urban communities, the nomadic life of the industrial workers due to constant shifting of industrial activities, and above all, the development of our cities without consistent and far-reaching plans for the distribution of population and its relation to the social and economic activities of the community, have produced the city slums and rendered the highest ideals of home life impracticable for the masses of the people.

Recent years have witnessed the growth of the garden-city movement, which may be described as *a synthetic expression of the most modern ideas and ideals of community needs met consistently and economically.* Its aim is the conservation of human resources and the increase in human efficiency by an equitable distribution of the common assets created through the economic, social, and political activities of the people.

While this movement has been making modest headway in scattered and obscure sections of England, France, and Germany, our cities have been growing at a pace that has called into being the skyscraper for business, and the congested barrack-like tenement for human habitation. The attraction of the urban centers, the tendencies among our immigrants to herd themselves in large industrial communities, within limited areas, the lack of

proper transportation facilities, and the failure to distribute and fix the location of industrial and commercial centers by adequate zoning of our cities, have made life in the American city almost unbearable to those whose ideals and standards of home life and home comforts have not sunk to the low level demanded by the tenement and the skyscraper, the sunless and slumified business center.

The great development of the suburbs that our cities have made necessary are the most inspiring sign that there is among us a class of people in whom home ideals still survive, and who have come to consider the city as unfit for habitation. The most influential of our citizens, the social and industrial leaders of the great metropolitan centers, our writers and inventors, while deriving the stimulus for their work and service from the masses and activities of the city, are making their homes in the suburban and rural communities. The cry, "back to the soil" is not reaching the man who works with his hands, but stimulates that class of our population which is most needed and whose service in the city is most valuable.

The suburban districts of Philadelphia are increasing in population twice as rapidly as the metropolitan city, and New York's satellite communities are draining the most vital and most influential leadership of the great babel of towers and tenements.

The congestion of the great cities has caused not only the most desirable to migrate toward the open country, but the great manufacturing plants have been compelled to seek homes in the less populous communities, or to create communities of their own

in order to provide for their workers decent and reasonably cheap living conditions, and secure for their industrial activities surroundings and facilities conducive to efficient work.

The deplorable political conditions of our large cities, as represented by "the gang," which have been gnawing out the very heart of democracy, are due to the failure to provide and maintain normal living conditions in our cities. The exodus of the most valuable leadership, due to these unfavorable living conditions in our cities, has made gang politics more influential without the reaction that intelligent and honest leadership would foster. Our social and political life is rapidly creating social strata which are clearly distinguishable by their place of residence. This is due to the failure of the city to preserve its home-making facilities, and urbanism is becoming synonymous with slums and corruption. If a reaction does not set in, and we continue this abnormal city development, we shall soon find that the city has become the menace of democracy instead of being its hope and inspiration.

The suburbanite is a disenfranchised citizen so far as his home community is concerned. While the pernicious activity of the politician is manifesting itself both in the city and in the country, our suburbanite pays with his citizenship for the privilege of rushing for his train.

Is there any remedy against this very serious social problem? Can we meet the present objections to city life by any practical method? These are questions which the cities should ask themselves with all the haste and apprehension that loss of

leadership and danger to the political life of the great metropolitan centers stimulate.

From fifteen to fifty per cent of the areas of our great cities remain unused. Thousands of acres of land are being kept in idleness, either because the growth of population has followed some direction away from the land in question, or because of the speculative value of such land, which makes it profitable to keep it out of use until congestion brings market values to the expectation of the speculator.

Every city has within its precincts open spaces sufficient in size to accommodate garden cities of various sizes and descriptions. Even New York City has land available for this purpose, and Chicago, Philadelphia, Boston, congested as they are, at some points have still sufficient areas to accommodate scores of garden cities, or villages, which would afford the most attractive and healthful surroundings consistent with a reasonably moderate income. Here and there enterprising real-estate dealers in America have grasped the conception of the great value of urban life when combined with surroundings that eliminate the city's most undesirable elements.

The garden-city idea can be applied to any urban community, and may be carried out either as a private enterprise, a municipal land-ownership scheme, or a copartnership scheme such as has been so successfully used in the garden-city development of England.

The garden city as a conception of community building represents the latest and perhaps the most efficient effort in the direction of conserving the advantages of a normal environment, while making

every provision for sanitary, educational, business, and esthetic needs of the people in the application of the garden-city idea to the building of new communities. In the development of established populational centers, two factors have stood in the way: the paternalistic conditions, under which it found its earliest backing — Port Sunlight, Bournville in England, Essen in Germany, Pullman, and Gary in the United States — have placed the movement at a disadvantage in the eyes of the "practical business man," who considers it economically unprofitable and, from the point of view of the American worker, undemocratic. The second disadvantage of the garden-city movement is to be found in its use of undeveloped territories almost exclusively, and its failure to gain a footing in the city.

With vast areas available in our cities, the question of developing ideal community conditions in the very shadow of the most hideous slums is not one of practicability but of efficient community administration. The growth of the tenement as a home-building unit has been taking possession of our most valuable areas, and in many instances this tenement invasion has actually reduced rather than increased the land values. That the dividend-producing period of the tenement is limited as congestion increases beyond a certain point, and that the life of a building is reduced, and the cost of fire protection, sanitary provisions, safety, etc., are constantly on the increase, due to the necessity for strict legislative control of the tenement building, is generally admitted. It may safely be stated that the high rentals which constitute such a large share of our earnings are increasing as the facilities for normal home life decrease.

The garden city, as a method of sectional development of our cities, would make possible single dwellings and would lend permanency to rental or ownership values far beyond those that prevail under our present disorganized and tenement-ridden *régime.*

The city as a unit, in which smaller community units in the shape of garden cities and villages may extend their activities, should not be confined within the strictest boundaries of its administrative precincts. Political boundaries, like political parties, are a convenience and not an organic part of our community-building limitations. Unless in the building of cities we relegate traditional legal or political boundaries to the junk-heap of outworn social conveniences, we shall fail to protect our urban life against its most dangerous foes.

While we all desire to maintain and protect the highest possible standards of life in our cities, we must remember that this cannot be accomplished merely by the development of bulk. Each city must make concessions to its adjoining territories, whether they be within or outside of their geographic administrative limits. If the wage-earners must be shifted from the city to suburban communities, if they must be suburbanized, let us recognize the fact by placing human requirements before community pride. If we find that industrial plants can best be accommodated in outlying territory, let us be broad enough to recognize that the business and commercial enterprise will get its quota of benefit from the proximity of such a plant, even though in doing so they do not exact the tax of human discontent and human misery that results from failure to provide the best facilities for the housing and protection of the workers, and the most favorable

accommodations under which industry should be carried on.

The garden city stands as the first and most successful practical example of community building, elastic in its application to city and country alike, adjustable to the needs and possibilities of private or public enterprise, economical and just in its distribution of benefits.

CHAPTER VIII

THE COMMUNITY OF THE FUTURE

THE housing of the individual and the family is a problem of the past. The great unifying influences of our intensive civilization, and the urbanizing influences at work in the most congested as well as the most sparsely settled areas, have broadened the problem of housing into one of community building. Housing reformers and city planners are already finding it difficult to differentiate the two fields in which constructive rather than palliative work is necessary.

The destruction of cities and villages wrought by the war abroad, and the rapid growth of cities in this country, are giving new impetus to the development of sound theory and its efficient application in the upbuilding of the *city of the future*.

As we study the evolution of community building we find that it has followed the lines of development represented by the social, political, religious, and economic institutions of the peoples that have built them. The eras of conquest, despotism, militarism, and religious fervor can be traced with the greatest accuracy in the trail of civilization that ends in the great civic structures of western Europe and begins in the monuments of Babylon and Egypt and perhaps earlier. Whether our modern cities should represent merely the economic and political order under which we live, or whether they should represent the whole of our civilization with all its

potentialities applied through the science and art of community building, this generation shall determine.

Those familiar with the tendencies in modern social life realize that we are developing a social state which is based upon a struggle between economic individualism on the one hand, and a social democratic state on the other, and that there is a constant leveling of economic advantages which is menacing the individualistic economic state. That there is much confusion between progress and civilization must be admitted if we are careful to differentiate the two according to their correct meanings, *the former relating merely to the sum total of human achievement, while the latter as indicating the extent to which this achievement is serving the best interest of all the people.*

It is to be hoped that this conception of civilization will be applied to the interpretation of democracy which this war is bound to define and secure for the masses of the civilized world at least.

Were we to analyze community building from this point of view we would find that the three essentials in the development of the city of the future are *adequate protection of the life of all the people, the development of facilities for efficient, ample, the least energy-consuming labor, and the providing of facilities for wholesome, creative, and highly socializing leisure.* A new science of community building is awaiting a discoverer, and a new civic art, in harmony with human needs and most in harmony with modern civilization, is awaiting an interpreter.

Community building is affording a new opportunity for the interpretation of modern life in terms

of human values both in the protection and development of such values as social assets and in terms of one's value to himself.

Individualism and the *laissez-faire* doctrine are coming to be recognized as both anti-individual and anti-social when we count up the wastefulness, and countenance the hideousness, that these methods have produced in the building of our cities.

Lord Macaulay once wrote to a friend in this country that "The Goths and Vandals of Rome came from without, but yours will come from within." When one views the architectural work of the last generation one cannot fail to be impressed with the truth of this prophetic statement.

In viewing the various methods of approach as expressed by our prophetic engineers and builders of Utopias the differences of point of view strengthen the belief that no one man will be the true prophet or the builder of the city of the future, but that it will be the synthetic creation of all the civilizing influences at work upon all the people in shaping their individual and social destiny.

We must visualize the city of the future, not in terms of great structures with platforms and storage places for aeroplanes, and underground garages for automobiles and trains, but as a decentralized community which extends the blessings of productive industry, safe living, and the highest type of culture into the remotest parts of the country. I am thinking of the city of tomorrow, not as a conglomerate administrative unit, but as a great social institution in which the human values will stand out as the paramount achievement, and in which industry and commerce and politics and war and nationalism will become merely means and not ends in which

the highest type of cooperative individualism, with the home as the fundamental unit, will develop.

The test of the city of the future will be its adequacy in providing for the life, labor, and leisure of its people, and the housing reformer will have to join hands with the city planner to achieve this great end.

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